TO AFRICA WITH THE MIGRATORY BIRDS

BENGT BERG

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J. H. to Russell via Rhe.
by whom this is gratefully inscribed
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TO AFRICA WITH THE MIGRATORY BIRDS

BY

BENGT BERG

WITH 75 ILLUSTRATIONS

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TO AFRICA
WITH THE MIGRATORY BIRDS

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by
Bengt Berg

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TO AFRICA
WITH THE MIGRATORY BIRDS

TO AFRICA WITH THE MIGRATORY BIRDS

CHAPTER I

When I was a child each autumn there used to pass over the coast by my beloved Swedish home a stream of birds-of-passage. From Lapland and from Finland, from Russia, and even from the coasts of the Polar Sea, the birds came down to us. When the wind was favorable they swarmed by from the earliest dawn until evening when the stars began to twinkle in the sky. There were times, when the season was early and sharp, when they flew clear through the night.

Migration of the cranes, more than of any other birds, became a passion with me. And, as time went on, I fostered a hope of following them—a hope which grew stronger with the years.

The cranes always flew very high beyond my childish

reach. They flew as high as the sun, it seemed to me. And their wings had a much wider spread than those of other birds. In my imagination I pictured the cranes as large as winged men; and it excited me to think of such creatures being able to fly wherever they wished in the entire world.

They never stopped at the coast; nor did they ever pursue the same course along it that the countless waterfowl followed. The cranes invariably came winging their way from the inland forest. When we saw them first they were calling loudly above the coast line. Perhaps this was because there were many young ones among the flocks that took alarm when, for the first time, the land beneath them vanished and they looked down upon the sea.

At this moment in the migration the closed line of the flocks would break and hesitate. The larger birds circled or soared while others, perhaps all young, questioned and answered each other screechingly with necks far outstretched. But this performance lasted for only a few minutes. Presently the rank overhead closed up again as if by command and the living chain of pearls slid away into the firmament or disappeared in the white woolly clouds which, at that time of year, lay over the sea about Öland.

For a long time after the cranes had vanished their cries seemed to have bewitched me. It was a sound that gave expression to a sense of freedom and longing in a way that no human voice had ever done. It came ringing to me through wide spaces and opened the door of some secret cell in my soul for which I, alone and unstimulated, possessed no key.

Nobody had told me that the passage of the birds overhead was merely a part of their journey from their homes in the North to the great gathering place of migrating birds on the island. For years their regular arrival and departure in the sky formed a mysterious spectacle which conveyed no meaning to my childish mind.

The migration always came at the time when the sportsmen of the little town on the coast went over to Öland to shoot curlews and partridges. One day, on a sunny September morning, it happened that I, as a small youngster, was also allowed to go. That excursion, and the meeting with the great host of cranes on the plain at Öland, dwells in my memory as the first wonderful adventure in my life.

CHAPTER II

He was one of the citizens of the little town; a man with somewhat overbearing manners, who dealt in raisins, sugar and gunpowder. Guns hung in rows upon the wall of his office. He could swear and rage like a trooper, but, in spite of this, there lurked behind his curly red beard a brusque laughter that startled horses, and induced the surliest of men to smile. When he was out shooting he wore a belt holding fifty cartridges, and inside his breast he wore a heart of gold. In addition to this, he was the envied possessor of a tan-colored dog, called Pang, who took the greatest delight in consuming raisins and chasing the town cats on to the roofs.

Pang and I had got to know each other in our common enjoyment of these pursuits, and it was as Pang's chosen friend that I was allowed to go too: to carry the partridges, as it was put. Sitting behind the broad back of our patron

Cranes in Flight.

The Flight of the Birds-of-passage.

in the creaking carriage, he seemed to me and Pang to be a god who held sway over limitless hunting-grounds, and owned countless treasures which lay packed in the carriage-box.

The journey covered many miles. It was a hot day, and the flat country was monotonous. The road wound white and dusty, like a long ribbon, past a succession of small white churches. A new one appeared towards the south as often as we left the last one behind. Neither Pang nor I had been able to sleep during the night, from excitement. The scorching sun blazed full in our eyes. The carriage rocked. And so we both fell asleep, and dreamt of the sport we were to have, and of banging guns. Suddenly we were awakened by the thundering voice of our hunter host.

He had stopped the carriage. "Look, look!" he shouted, "look at the cranes. By Heaven, what a lot there are!"

And I see them now as clearly as if it had all happened yesterday. We had arrived at a distant part of the east side of the island. In front of us the road led past a handful of small gray houses. Round about us spread the wide Öland heath, bordered in the distance by a narrow strip of the Baltic. Here and there the landscape was broken by small

cultivated pieces of land enclosed within low stone walls. On the whole wide plain no living thing was visible, save the phantom-like forms of some horses, which seemed to swim in the heat waves far off across the heath. And above them, emerging as it were from the clouds, came the great throng of cranes.

They were coming from the north, the direction from which we had come. As I opened my eyes, the nearest flocks of the great birds were so close that we could see the colors of their plumage. They took no notice of our presence, pursuing their own way. Behind them came another flock. Behind them still another; and above them there followed line upon line, ever higher and higher up, extending, as I remember it, right across the plain to the horizon.

They came sailing down straight upon us, glided by, and taking the form of a phalanx, passed along across the heath. The flocks closed up, opened out again, sank low, mounted aloft, vanished apparently beneath the horizon, then rose again, and again sank low down like living chains of pearls. Probably there were not more than a few hundred in all, but to my childish imagination it was a spectacle which eclipsed, by far, the flight of the roc in the Thou-

sand and One Nights, or the passage of the Persians across the Hellespont.

Our hunter host cracked his whip and drove on. When we came to a halt between the buildings surrounding a farmhouse, and the people came out to bid us welcome, there passed by over the gable of the house more and more ranks of the flying army. Their loud calls rang through the air and were answered from the distance. From where did those answering calls come?

It was the same magical call that proceeded from the clouds at home when they flew over the coast. Here it filled all space between earth and sky. Compared with the rushing beat of the wings up there the voices of the men seemed so ridiculously feeble, and their movements so clumsy.

In this country there dwelt two distinct living things —human beings and cranes. The human beings were bound down to their barren fields which they had enclosed within fences, and to the little houses of their small towns. The cranes, on the other hand, had the heath and the whole of the wide atmosphere for their dwelling place, and could fly wherever they wished. I cherished the thought that they

were doubtless numerically superior. The clamor of their voices rang in every direction. Sometimes it sounded as if they were quite close to the house. The paving stones of the farmyard burnt under my feet; I stood apart, forgotten by the strange men. Then the broad back of our hunter host disappeared behind the door of the friendly chamber, and Pang and I crawled unperceived through the hedge between two adjacent house corners.

Outside there were no cranes to be seen, save those which were passing overhead. The stone walls of the fields, that had appeared so low from our high seat in the carriage, obscured the view on every side. The herds of cranes sank down and disappeared behind them. But I continually heard, coming from the direction towards which they had flown, that peculiar clamor of voices.

Surely it was the cranes. They must have alighted there —out there upon the heath—behind the next stone wall.

The red-brown dog, who was accustomed to scent out partridges in the fields, leaped the wall like a fox. And so we gained clear ground and the race began. Beyond the next wall no cranes were to be seen, nor beyond the next

THE ARMY OF CRANES.

The Moor at the Foot of the Mountains, Where the Curlew Rests.

one. But Pang, who had realized there was something quite unusual on hand, raced ardently ahead.

So much happened then that I can only remember half of it. There were sheep which took to their heels in wild alarm. A bull appeared and threw the earth up with his horns, and chased us until our heads swam. Then there came a moment when Pang suddenly stopped and stood still as a stone, and I tore past him, and a covey of partridges buzzed about our ears like a swarm of bees. On and on we ran until the stone walls suddenly came to an end, and the broad heath lay before us. And there stood the cranes like a company of soldiers, as though they had grown out of the earth! It seemed to me that they were much bigger than myself. Pang saw them at once, and made straight for them, while the cranes, uttering resounding cries, raised their wings like dark sails against the sky, and closed in upon the silly dog. Then I ran, as though it were a matter of life or death, to take hold of him, for the terrifying thought suddenly came to me that they might kill him.

The sun went down and twilight covered the heath while we, fearful of the bull whose whereabouts no one could make out in the darkness, toddled homewards by a

roundabout way. I stumbled over stones and was torn by thorns and fell into ditches. Tears ran down my cheeks and my heart throbbed. But Pang stayed loyally by my side. And in the middle of the night I got back to the house, torn to pieces and without my cap. There was a thunderstorm. I was sent to bed without food and dreamt of the cranes; of how they attacked the village and trod upon my bed with burning lights. I awakened in fright.

There stood the hunter in his nightshirt on the staircase thundering:

"Have the cranes possessed you then, foolish boy? Mind, if this should ever happen again, there's spanking in store for you."

CHAPTER III

From that day forth a vision of flying cranes was constantly before my eyes. "Their homes are in Lapland. They are flying to Africa," I was told in reply to my questions.

Africa!—could they really be on their way to Africa? That strange word, that has cast a spell over so many millions of people, filled my youthful brain with strange and fantastic visions of cranes alighting upon the tops of the pyramids, or proudly stalking among the negroes and the crocodiles. Moses in his basket, and the princess who took him up, likewise came into the picture.

I read everything I could find in the house about Africa —of Livingstone, Baker, Stanley, the lion-hunter Jules Gerard, Anderson. I read those wonderful books about Lake Ngami and the Okavango River; and also those grand, though exaggerated, stories of old du Chaillu, about the dangerous nature of gorillas.

All of it, however, was about quinine, thirst, frightful perils of life, and of beasts and natives who had luckily been killed. Concerning cranes, there was nothing. But it was said they also lived in Lapland. There I decided to go.

Upon my arrival in Lapland I expected to see cranes all over the place. During the first summer I caught sight of not a single one. I was far inland among the high mountains. In the following spring, when the ice on the lakes and rivers was breaking up, I saw a single pair coming up the river valley. They flew quickly and silently by, and vanished in the mountains, whose white peaks shimmered in the distance. The inhabitants maintained that they lived among the widespread mosses, across which one could only make headway in winter. They had all seen cranes in flight, but no one had ever found a crane's nest.

I explored the pasture land where the ruffs had their sparring grounds, and roamed over the moor where the curlews nested. But there were no cranes there.

A third spring elapsed; I heard their call at night—there were always two—coming from the impassable swamps on the Sjaunja River. There they had their young ones. The Finns had seen them on the quagmire, during the hay-

mowing season, where the ground gives way beneath the feet.

And so it came to pass near midsummer's day, in the fourth year, that a Lapp, who was seeking for strayed reindeer on the moor, approached us, and announced that he had found the eggs of a "Kuorga—the bird as big as a man." The nest lay in a swamp called Avakajo, where the whooper swans lived.

There was no time to be lost. The Lapp announced that one of the chicks had already picked a hole in its shell, in readiness to creep out. We set forth, the Finn, the Lapp, and myself, and traveled through evening and night over lakes, heath and moss, where reindeer tracks were unknown. We gave up trying to keep our bearings, and picked out our way where the ground was least treacherous. Between narrow strips of dying trees threatened by the swamp, the moss extended its arms ever wider towards the mountains. Whenever we had successfully crossed a stretch of quagmire we sought for the crane.

So these were the surroundings in which they lived! Thus would the nest lie, like an eagle's eyrie—moss and twigs scraped together—in the middle of a flat moss, whence

the great sharp-eyed birds would be able to perceive every threatening danger a mile away.

But there were no cranes to be seen. Gay-plumaged ruffs were holding their combats on the marsh ground. Snipe were everywhere on the wing. The air was filled with the distant hum of short-eared owls, a sound which came from one knew not where. Small sandpipers, no larger than sparrows, rose at our feet. There was so much to hold the attention. An unusually blue hen-harrier flew here and there in front of us, as if he wished to point out our way.

But the Lapp walked on unflaggingly across the quaking moss, and to every question put to him he made the same reply—"It's only a short mile farther." He knew only too well that the higher the sun rose after midnight, the more difficult it would be to make progress over the uncertain ground. Towards morning he led us into a marshy tract, where the ground gave way everywhere underfoot, and where we had to force our way through thick undergrowth. He began zigzagging this way and that, and finally came to a full stop. He was bewildered.

We were not surprised at this. It would, indeed, have been remarkable if he had known the way. Here we were

in full daylight, lost in a deep swamp beset with undergrowth. When we trod upon a root to raise ourselves out of the swamp, the wings of peewits beat in our faces. And it was in this jungle that we were supposed to find cranes! Naturally we saw not as much as a feather, and I applied my slight knowledge of the mixture of three languages spoken in that region to make it clear to our guide that I believed the whole affair to be a hoax.

Whether in Lapland, or in Palestine, there are always persons to be found ready to allure one with enchanting tales of things one ought to see, inducing one to follow them for a whole day or longer to see something remarkable. And the result, when the critical moment comes, is nothing more remarkable than that they expect to be paid. But the Lapp kept repeating the only Swedish sentence he knew—"You will see."

We had spent the whole morning crawling and wading here and there. Suddenly he began shouting like one possessed! He was not far off—only a few hundred yards—but it took an eternity to reach him. And there stood the Lapp by the nest of the "Kuorga—the bird that is as big as a man!"

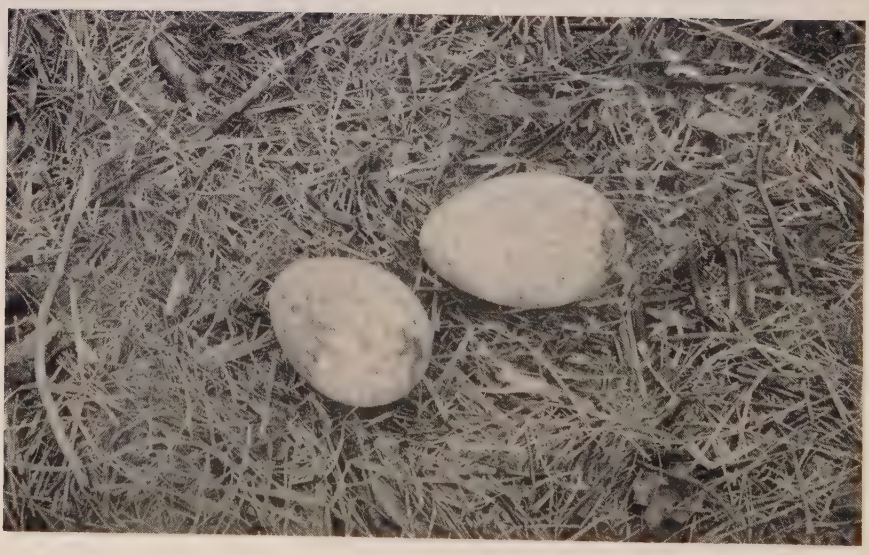
"You will see"—he repeated; and he had good reason for saying so. The image of the nest is stamped upon my brain as indelibly as the illustrations imprinted in this book. I have no picture of it other than the one in my memory, for at that time I had not yet learned to ramble about with a camera in such surroundings. It was all so different to what I had expected. I didn't think the crane would be living in the middle of a vast flat moss. This often happens with things when free scope is given to one's imagination. Reality presents them in quite a different aspect.

Moors on every side; a strip of open bog between the willow thickets with still, shining pools where the loose mould stood out pitch-black against the edges of the withered floating grass-sods. Isolated skeletons of dead birches showed, nevertheless, that there was a bottom. At one place the willow bushes indicated an extensive tongue of somewhat firmer ground. This area, however, merely comprised a small island in a quite unapproachable region.

What induced the Lapp to come to this spot in the first place remains an enigma. The Finn who was with us reflectively observed that even wolves would not come to such

KUORGA—"THE BIRD AS BIG AS A MAN."

The Soaring Crane.



The Beautiful Crane's Eggs.

a place. And exactly the same thought had, in all probability, occurred to the crane when she chose this spot for her nest. For the wolf was the only creature, except human beings, of whom she stood in peril. The golden eagle scarcely dares to attack her, and the fox is wary of sneaking about in a spot where the bird's long neck may suddenly thrust itself up in the bushes.

And the nest—an eagle's eyrie on the ground, as I had pictured it to myself—was scarcely to be called a nest. It was placed on the one and only grass hummock between two of the outermost willow bushes. On the hummock was a flat bed of withered grass. And there lay two huge, wonderful eggs, flecked with brown, red, and gray. It all looked so strange! The eggs lay a good handsbreadth from each other; not close together in the middle of the nest, like other eggs. Peeping out through a hole in the thick shell of one of the eggs was a young "Kuorga."

But the Kuorga herself? No! she was neither to be seen nor heard. There lay the nest with the eggs. That was all.

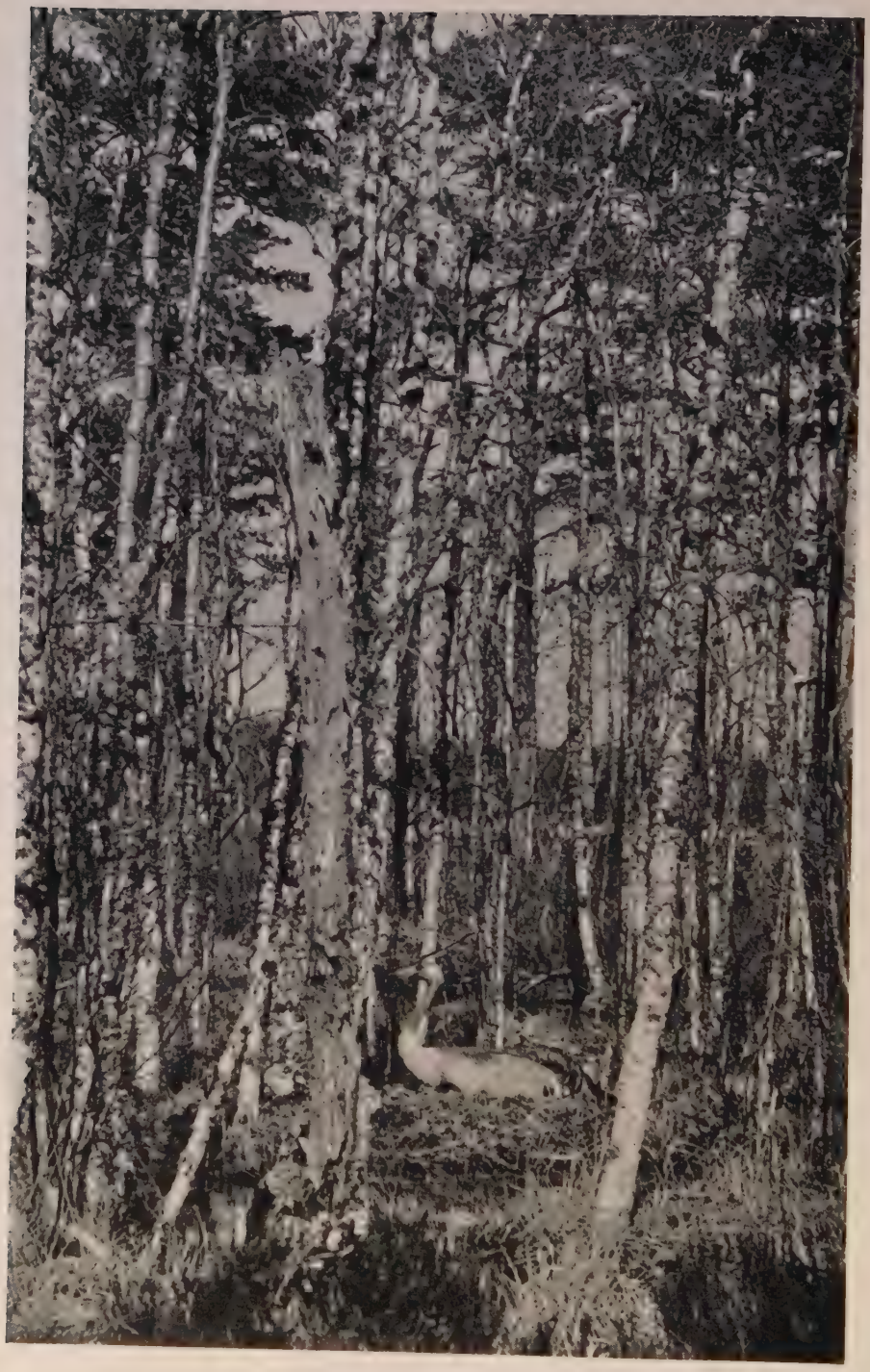
Had the Lapp seen the Kuorga? No! Had anybody seen or perhaps heard the Kuorga?—No!

But surely the bird had been here and had flown away the first time the Lapp came to the spot. No! she had never got up at all. There had absolutely been no bird there. The Lapp became nettled. He raised his voice and gesticulated with his arms. He had been looking for reindeer calves in the strip of wood, and had come from far away across the moor. Then he saw something that moved between the willow bushes, and disappeared again, and thought it might have been a reindeer calf. But when he drew closer he found very deep swamp but no tracks and only the eggs of the "Kuorga."

Oh, you wise bird—so wise to remain silent; you, whose voice drowns sound of all other birds—which you at other times give forth so joyfully—too wise to fly away; you, whose strong pinions lift you so freely from the ground—so wise to crouch like a reindeer calf when you fled from your nest in the hidden swamp; you, who carry yourself more proudly than all the others! How many times since then have I racked my brains for means to outwit your cleverness?

With what forethought the place for the nest had been chosen! On either side the crane could observe across the

"O, You Wise Bird!"



THE DYING WOOD.

moss every living thing in the vicinity, without fear of her long prying neck being detected among the willow branches. How freely she might vanish into the reed-bed on one side or the other, should any one approach from the opposite direction. In fact, as had just now happened!

Nobody had a notion where she was. So after we had broken our fast, and appeased our hunger, I put aside my presumptuous thought of approaching the bird with the clumsy type of camera then in vogue, and we stirred ourselves to find a way out of the swamp.

Then, suddenly, the Finn called out to us. He pointed in the direction where the moor lay like an open widespread pasture. And there, in the far distance, stood the "Kuorga" —the bird that is as big as a man.

She looked so tall as she stood gazing at us, that she really looked like a human being. But only for a moment. She stooped down; made two long strides; raised herself again. She was browsing!—in order to cover her uneasiness.

Oh, you wise bird——!

CHAPTER IV

I spent four more years rambling over the wide moors of Lapland with Lapps and Finns who knew every inch of the country, but we never again found the nest of a Kuorga. Not until several more years had elapsed, during which I was occupied with other birds in other countries, when the memory of the Kuorga had faded to a star—a star that I had once dared to think was within my reach—did I chance to run into a man who informed me that he was acquainted with a peculiar lake, that lay in a desolate forest region in the interior of the south Swedish highlands, a kind of submerged region. There he "knew of a crane's nest." He believed it was on an island.

This sounded too good to be true! Thinking the matter over, I reflected that, although one might be fortunate enough to come across a crane's nest, or two, during one's lifetime, it must always remain a matter of pure chance. And this nest was said, even at that very time, to be on an

island! The man who reported it was a well-known hunter, so on that same evening I set forth to the place.

It was in the beginning of May. The cranes had been brooding for the past fortnight. That was a certainty. But where? There was the lake and there the island, but no cranes were to be seen. The wood-ranger who had charge of the game preserve assured me he had seen a crane flying between the lake and the forest in the early spring. It was a single bird. It had uttered no call. Therefore, presumably, the great bird was breeding in the vicinity.

The lake resembled a net of small islands with a little water between them; a desolate submerged moor, where the bog had sunk into the ground, and the wavelets gurgled among the trees on the island. The thick undergrowth of willows on the Lapland moor came vividly back to my mind. Where should I find here the submerged wood, the willow bushes, the slender shrunken birches, and distant vistas? Wrapped in these thoughts, I rowed my boat from island to island until I reached the dying wood.

It was a belt of flooded land. On the higher ground the fir forest stood dry and firm, but below the stagnant water the lanky birches were gradually rotting. As I waded to the

bank I saw, along a depression in the ground, a pair of great wings disappearing between the tree trunks.

The crane! She must have run to the bank, and flown away under cover of the wall of the pine forest! But from what spot had she started? I tried to figure out where she might have been when she first detected me on the edge of the pine forest. I made my way along from that point to the place where I first caught sight of her. I was right! Not a hundred paces distant in the swampy wood lay the nest! It was exactly like the nest in the Lapland morass; that is to say, properly speaking, there was no nest at all; merely two exquisitely beautiful eggs lying a handsbreadth apart on a mound of sward, which was as flat and broad as an altar. The only sign that the great bird had bestowed any care on it was a handful of grass spread out beneath the eggs. And there I stood, cap in hand, tired and reverent, fully as reverent as if I had been standing before some altar fashioned by a divinely inspired craftsman. And the thought passed through my mind that such luck was scarcely likely to occur more than twice during my lifetime.

The day was near its close. There was nothing to do now but go away, lest the eggs should lie exposed more than

five minutes to the cool evening air; and before the cranes should become aware that someone had seen their nest. Moreover, they must be left with the impression that the boat was a harmless fishing craft, which had merely by chance, and not with ill intent, been brought to the place. Without doubt, four telescopic eyes were peering at me and my doings from some safe lookout. So I pushed the boat off, and rowed slowly back, and, under the pretence of being busy with a net, I kept the spot under secret observation through my field-glasses. Nothing was to be seen or heard until the moment when dusk set in. Then the two great birds came sailing as silently as ghosts across the water, and disappeared behind the silhouette of the dying wood. I saw nothing more, so rowed homeward perplexed and puzzled, and the whole night long I lay awake racking my brain as to how the matter should be taken in hand. The mere possibility of coming face to face with an old Swedish crane was enough to keep one awake for weeks.

But surely, some may say, it is a perfectly simple matter to erect on some suitable spot a hiding place made of bushes and lie there with photographic apparatus. Yes, no doubt; quite a simple and straightforward matter. There was once

a man far more experienced in the handling of a camera than I am, who, after long waiting, was shown a crane's nest. He built for himself just such a cunningly devised hiding place; and the crane came, beheld the man of wisdom and forthwith abandoned the spot forever.

This method therefore had been tried, and I knew of four or five other equally good ones. If only there had been enough time to enable me first to conceal myself, and then make an attempt to creep nearer during the course of some weeks! But there was no time to spare. It was already the latter half of May. The crane might hatch the eggs any morning and be off with the young ones, or she might even fly off with them to another place. Nothing could be certain where a bird of such intelligence was concerned. The only thing to be done was to construct a hiding-place in such a way that the old birds would not discover it. I had a week to do it in. A week of rainy days—and my hopes would be utterly ruined. But the next morning ushered in the first clear sunny day of summer, and in the prow of the boat I piled up an assortment of kitchen knives, a pointed saw, a pair of hedge clippers, an axe, a crowbar, two spades and some empty sacks.

The farm hand who was helping me through thick and thin in everything, without knowing quite what it was all about, stared pensively.

"It almost looks," he remarked, "as if we were going to dig for hidden treasure."

"That's what we are after, Johanson," I replied, "and he who will keep quiet shall have his fair share."

Yes, he could do that.

We rowed through narrow channels and across small bays, until the dead wood lay straight before us down the wind. Here we let the boat drift, and I related such harmless stories that Johanson's laughter might be heard half-way across the lake. By the time the boat had drifted into the swamp where the crane lived, she had gone. She had had plenty of time to take stock of us at her leisure, and make up her mind that we were merely casual fishermen, devoid of the least thought of creeping up on her.

The crane was nowhere to be seen in the tangle of wood and flooded moor. But all of a sudden, after we had carried our chattels up between the trees, and while I, over my knees in water, was digging out peat sods with the large kitchen knife, two cranes gave voice, one after the

other, to such resounding cries that the cuckoo in the birches, who had just been calling, was surprised into silence.

The sun was high. There was no danger of the eggs becoming chilled! moreover, I had taken the precaution of covering them with a wooly scarf. We had two hours in hand. So we dug and burrowed ourselves into the wet moor with all our energy, and eventually brought about a kind of rifle pit, less than twenty paces distant from the crane's nest.

It was an intensely warm day, and our sweat ran and mixed with the peaty water. Our appearance is better left undescribed. After we had removed all the root fragments and turf sods in sacks, and had covered up the pole with an oil cloth and willow branches, we planted the newly arisen mound of earth with the choicest marsh flowers, and went upon our way talking loudly. I had previously fetched my woolen scarf, and satisfied myself that the eggs were still warm.

I am sure there are many people who will understand the fascination that lies in contriving, with the aid of simple changes, patience, and a little artfulness, the means of approach to the hidden lives in nature; an approach which has been debarred from us by the misdeeds

of former generations of mankind. Imagine the fascination of slipping out of one's shoes and stealing into the sacred spaces, where the noblest creatures of nature are in their own homes. One's intent is not to kill and slay, and drag away the carcasses as trophies, but to sit reverently in concealment to listen, and eventually to experience the wonderful, priceless feeling that suddenly stirs the heart when, mayhap, a tiny mother-bird defends her brood from a much stronger enemy.

The day on which, wet through with sweat and peat water, I witnessed from my hiding place the great clever bird helping the chick out of its egg prison, is one of the most precious recollections of my whole life!

Language is so inadequate to describe feelings of that kind. The illustrations in this book must make up as far as possible for the shortcoming. They were obtained at the cost of a severe attack of lumbago, two damaged tripods, and a camera which sank before I could save it. For if, at that critical moment, I had as much as stirred a finger, the crane would probably have flown off to Africa, never to return.

It happened on an occasion when her suspicions had

been aroused that something of a menacing nature lay concealed beneath the mound, and she came forward to investigate the matter. The aspect of two wings, and the certainty that it was a crane that stood before me, gave me no more indication of her personality than a man's individual character is revealed by the clothes he wears. I use the word "personality" advisedly, for this was the case of a consummately clever bird, thirty or forty years old, perhaps, whose experience had been gained on her journeys round half the world. She had seen more, and had opportunity to employ her experiences much more widely than a human being, who is penned up with his arrogance between four walls.

Though the best way of getting an insight into the domestic habits of most shy animals may be to take advantage of their inferior perceptive faculties, greater success, in the case of those which are more intelligent, is likely to follow if one tries matching one's own cleverness against theirs. My experiment of coming to grips with the crane with a camera, instead of resorting to intermediate stages of approach, was based exclusively on the intelligence of the clever bird. Though she be ever so wary, she must be

Two Exquisitely Beautiful Eggs Lying a Handsbreadth Apart on a Mound of Sward.

"She was Intently Watching what I was Doing."

brought to believe that no one could possibly be concealed about the place. At the same time without doubt every alteration within thirty paces of her nest has already caught her eye.

It was on the fourth day after I had fitted up my hiding place in the swamp. During this time the boat had each day been allowed to drift across the lake, in order to convince the cranes that even though the boat was there, nobody ever put ashore from it. We had landed early in the morning. When we saw the great wings gleaming through the tree trunks, we knew that everything was as it should be. I need not describe in detail how I managed to get into my hiding place with all my impedimenta. The boat returned across the lake with two men in it, just as it had come. Even though a crane, with her keen sight, is able to distinguish a thrush a full kilometre away, it was out of the question to expect that she would detect that one of the men was a dummy.

A hush fell again upon the strange wood with its slim lifeless young trees, lifeless as though somebody had stolen their roots. The cuckoo, who seemed to like the spot because of its openness to the sunshine, came flying past be-

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hind his red-glistening mate. The mirror on my camera reflected a wide-angled view of the swamp, thus enabling me to watch the wooing of the cuckoos; how he flew from tree to tree calling to his fair one, who stole away every time just at the moment when his amorous solicitations reached their most emotional pitch.

I had reckoned that an hour would pass from the time the crane saw the boat disappear, and before she might possibly find her spouse again or appease her hunger, for which purpose she must, of course, leave the eggs occasionally. I expected that she would cautiously approach the nest through the undergrowth and trees on the other side, so that she might inspect my earth mound, which had not been there before. My terror when she suddenly appeared is indescribable. To enable me to look out, I had cut a few slits in the peat sods of the roof on the side where the crane was wont to fly away. I was in the act of widening the slits with my knife. A bare quarter of an hour had elapsed, so I thought I had plenty of time when, suddenly, there stood the crane in front of me, as large as life, and not ten steps away, intently watching what I was doing! At any rate, so it seemed to me during the following seconds, while I

slowly withdrew the knife little by little from the slit, while keeping my eye fixed upon her through the other.

I have no idea how much she really saw or understood of what was going on. I thought she must have noticed the movement of the polished knife. At all events she stood there, while I attempted to make use of this favorable opportunity, which might never occur again, for she was much nearer to me than to the nest, to unscrew the camera from its tripod, in order to direct it upon the bird. It was easy enough to unfasten; but there must have been a fault in the screw for the whole apparatus fell with incredible swiftness into the morass and water and disappeared. It was as if a living being had plunged into the darkness below. And in the wall beneath the roof of the front side of my mound, there gaped a round hole in the moss, into which a short time before I had so carefully fitted the object glass. Through this opening I saw how the crane raised up her neck and took notice of the change that had come about. She must surely have heard the splash, and must, so it seemed to me, have recognized every object in the cone of light which penetrated the hole, including my one green eye. So there I sat, unable to stir or to take a photograph.

The camera was ruined by the water; but that counted for nothing in view of the thought that the crane had doubtless discovered me, and that all was over.

Then there occurred something which struck me as being the most peculiar token of reflection and deliberation that I have ever come across in any dumb creature. It strengthened my belief that the crane's intelligence takes very high rank among animals. To my surprise it did not utter a cry and fly away in panic, like a sandpiper or a wild duck, or take herself off mistrustfully, never to return, as a wild goose or a curlew would have done. Instead she hesitated for perhaps a minute. I am convinced that during that time she was weighing the pros and cons of the situation. Then she advanced cautiously and with dignified calm through the swamp water to investigate the matter. My situation, without a camera, during her slow approach is easier imagined than described. What pictures I might have obtained as she came forward with the sun playing on her blue-grey feather dress! However, there was nothing to be done but wait in the momentary expectation that she would espy me through the opening where the camera had stood. I am under the impression that she came within

three yards of me. Pressed as tightly as possible against the wall, with the water well above my rubber boots, I could eventually see nothing but her long legs. At last these also disappeared, and I dared not move a finger, for fear of betraying my presence. An eternity passed. When I looked at my watch afterwards, I found that three quarters of an hour had elapsed until I caught sight of her again. She must have stood close under the roof, and then walked round about, and repeatedly have stood still to investigate the affair, for when she came again into my small field of view, she was walking with long strides from my hiding place to the nest, where she several times turned the eggs, before sinking down to brood upon them.

I ventured to feel confident now that the position was saved, and began cautiously stopping up the dangerous hole with pads of moss, taking advantage of those moments when her brown eyes were averted towards other objects.

That being accomplished, I could at last, without fear, pull up my sleeves and fish for the camera. It was there sure enough, but in the darkness I could only guess what it looked like. In spite of all my precautions, the crane must have observed some movement. With eyes like those of a

Prussian police sergeant she came forward to inspect matters, stood still for a while, looked all about her as if she were weighing the evidence, and vanished behind me where I could not see, and then a minute or so later re-appeared again on her way back to the nest. Gazing at all this through the moss stalks which latticed my peep-hole, I imagined for a moment that I saw double, but in point of fact there were actually two cranes, the female followed by the male. And there they strode about in the sunshine with graceful dignity, and here I was without a camera. It would be a long day before the sun would go down, and the boat with the "man" at last come alongside, but I would not have exchanged my hole in the swamp and the drama that I witnessed in that dead wood, for a box in the most distinguished theatre in the world.

CHAPTER V

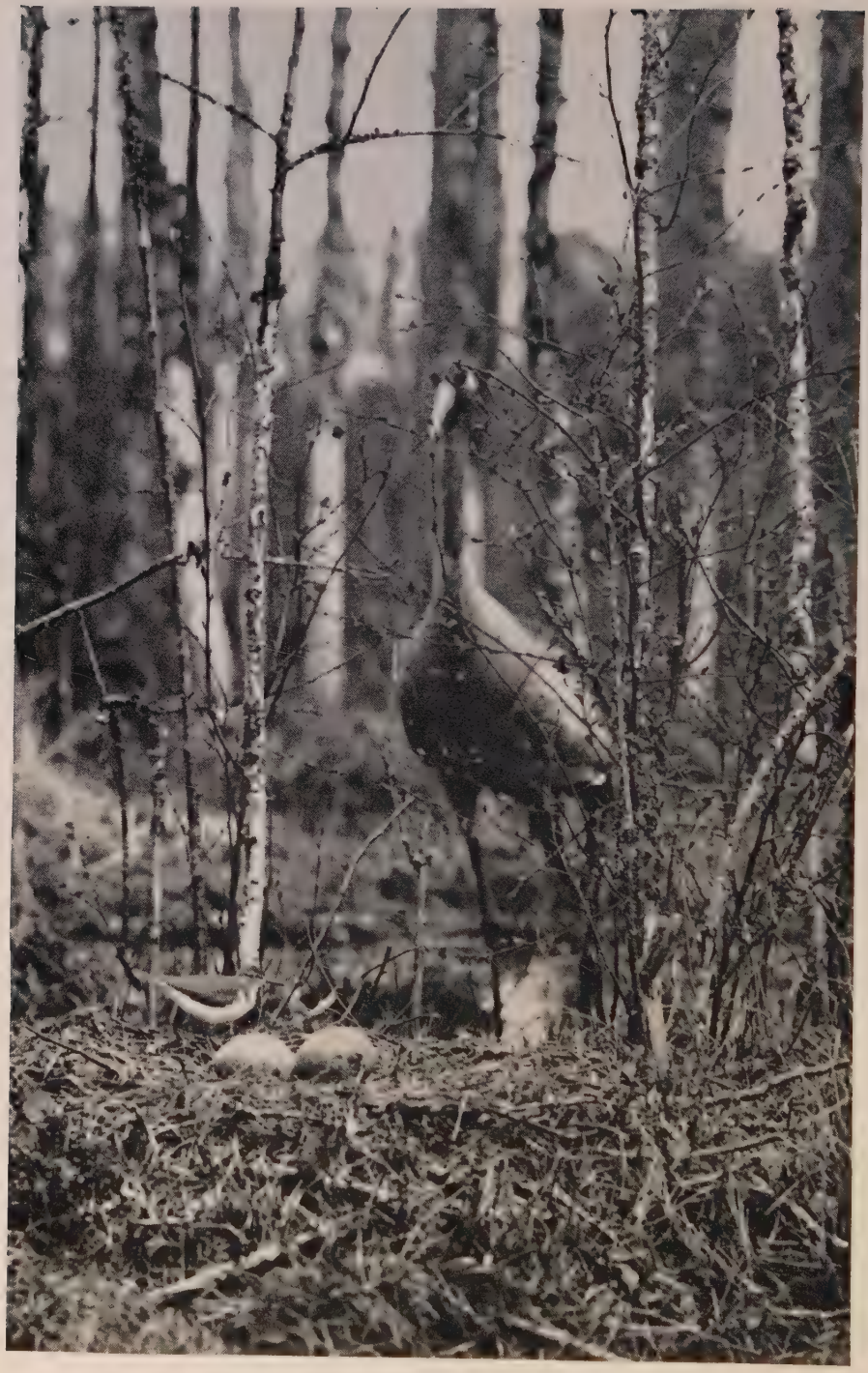
It was at last possible for me to settle myself down a little without danger, and to take deliberate stock of the quite remarkable personalities before me. The male remained half hidden among some trees, while the female returned to the nest. The male comported himself always in the same manner. He never came forward, and I never saw him brood the eggs or concern himself about them. Thus far he behaved like a male. Although I have no proof of it, I assume that the female had built the nest. The birds were as like each other as two peas. The male struck me as being much the less important of the two. The difference that I noted between them, during these few days, was that the male held his neck more upright, and that the respective borders between the black and white colors of their necks varied somewhat in shape. There was no noticeable difference in the red-brown region of their backs. Almost every species of animal has some peculiarity that gives cause

to deep pondering by the sages. In the case of cranes it always turns upon the brown coloration. The discovery was made once long ago that the backs of old cranes are covered all over in summer with red-brown feathers, and that the female besmears her back with peat earth, so as to render her breeding place less conspicuous to enemies.

Referring to this theory in his *Fauna*, our renowned Sven Nilsson made the following comment: "If Herr von Homeyer is of the opinion that the crane daubs himself with this pigment in order to bring about a resemblance between the peat moss and his breeding place, he will find but few ornithologists in agreement with him."

The Austrian had been right. Meves, the Swede, conceived the idea later on of analyzing some of the rust-red feathers, and as a result found that they contained the same kind of iron constituents as the red peat water of our swamps, and the rust-colored stones of our rivers and lakes, which contain peat iron. On the other hand, Sven Nilsson was quite right in his criticism so far as motive was concerned. It was difficult to understand why cranes should confine themselves to putting protective coloring on their backs. Against what object were they seeking

The Disputable "Red Brown Feathers."



"He Remained Standing There till His Giant Cousin Stood Right over Him."

protection? No bird, not even the golden eagle, ventures within range of a crane's sharp bill, and men at that time had not learnt to fly.

It is no rare thing for birds to become pigmented with rust-yellow water. The beautiful ochre coloring of the old lammergeyer, which he loses in confinement, is supposed to be derived from the mountain streams in which he bathes. The white plumage of old swans from the lakes on the tundras is spotted with rust-yellow, and a number of the duck tribe are similarly flecked, without any bearing upon the question of protective coloring. But to hark back—I had repeated opportunities on this occasion to observe that cranes anoint their backs with peat water and mud. It is not to be denied that the rust-red plumage, which they obtain by this means, corresponds exactly with the protective coloring that their small chicks wear during the whole period of their development. And the protective coloring of a brooding bird comes into useful play as a shield against the menace of those marauding birds who, though they are not strong enough to attack the brooding birds, must be kept in ignorance of the situation of the nest; lest, when the owner leaves it to seek nourishment, they

should have foreknowledge where to find the color-protected eggs or, in the case of eggs covered over with protective-colored down, of the spot where they are concealed.

It came under my observation several times that cranes have to reckon with enemies to their eggs and young, of whom they stand in fear. The male bird, who would stand on watch for hours together in the vicinity of the nest, used to utter a peculiar cooing sound, pitched in different keys, to express his meaning. The female seldom made reply, until the day fell upon which the young were hatched, then they "spoke" eagerly with one another.

If by chance a buzzard would come soaring around —an everyday occurrence—the two birds would follow his movements closely with their eyes, and the male would utter a repeated call of warning. And the same thing would take place when a crow would show himself on a tree. On such occasions, the male bird would let down his tucked-up leg, and take a few steps in order to keep him under observation, if he happened to be perched where he was not easily seen. On the other hand, if a harmless bird would come near, neither of them would show any concern. The male cuckoo, who doubtless regarded this wood as much his property as

the cranes', flew, calling untiringly, all day long from tree to tree, or among the bushes. I regarded him as an ally, for so long as he sat over me in a bush above my hiding place, the cranes were unlikely to regard my mound with suspicion. Sometimes he took it into his head to perch upon a branch in the birch thicket just above the crane's head, and there he gave voice as if he wished to serenade her. She scarcely even deigned to look at him.

A few days after my day of ill luck, I was hidden again under my mound with another camera, better prepared this time for what might happen. When all had become quiet, the first thing that came to the crane's nest was a small common sandpiper. He lived under a juniper bush on the adjacent dry mound, and had as his game preserve the cushion of peat moss and the quagmire. He found something to eat at the nest, and was standing close to the eggs, when the crane came up between the birches. He remained standing there until his giant cousin stood right over him, and then quietly left the nest to make room. And although one of the chicks was on the point of emerging from the egg, it was obvious that the hen crane never had as much as a thought of giving the interloper a peck, for she at once

set about busying herself with the well-nigh incubated eggs. Then gently bending her long legs, she softly, and with great care, leaned forward, and sank down upon her treasures on the ground.

Having sat there for some time, she became suddenly seized with restlessness. At first I thought she had for some reason or other become aware of me. She arose hastily and, bending forward with tucked-in neck, withdrew in the same way she had done on that ill-starred day when the boat came to fetch me. What could have crossed her mind? Presently she came back, having apparently fully regained her calm. I have often noticed that the cleverest of birds, after remaining perfectly quiet for hours at a time, suddenly became possessed with anxiety or fright, exactly like human beings. At such times they dash away in a flurry of alarm, and after awhile return as if nothing had happened. There had been no visible reason for fear. What can so suddenly come over them? I have seen it happen so often that I can put it down to nothing else but an attack of nerves, such as we are subject to. They remember something that has threatened them; they imagine they see it; and behave as if they had, just as human beings do. We

"She Arose Hastily . . . and Withdrew."

"She Either Loosened or Broke a Piece Off."

have no good cause therefore, so far as the weaker side of our nature is concerned, to discriminate unequivocally between ourselves and other animals.

It was on this day that the crane hatched her first chick. I had arrived in the nick of time, and regarded myself as fortunate in having a whole clear sunny day before me in which to witness this event taking place in front of my camera. I noticed during the morning that the chick's beak was emerging from the thick shell. With what care the great bird now strove to assist in the further development! While the brooding was in progress, she had several times each day stood up for the purpose of re-arranging the position of the eggs. All birds do that. She took the utmost pains to ensure that the little one lay correctly in the opening of the egg, in case its head might be turned downwards in the nest, or lest it should become injured by projecting stalks. During the morning she repeatedly got up to see how the matter was progressing, and walked mincingly around the nest, so as to avoid doing the little creature any harm with her great feet. Meanwhile the chick cheeped so loudly that I could hear it fifteen paces away. Then she stood for minutes at a time with lowered head, and gazed at

the momentous proceeding, as if she were listening to the beloved new voice, and considering what was the next thing to be done. Sometimes she moved the egg round in a circle, but in such a way that the little one's head was always uppermost. It may be seen here in the photographs that the opening is always on top. The thought occurred to me that for a mother bird with many eggs it must be impossible to exercise so much care, but in that case perhaps it is not of such consequence. After the hen crane had many times stood leaning down, as if in contemplation, she carefully took hold of the shell, at the edge of the opening, with her beak, and either loosened or broke a piece off—I could not quite make out which. Every time this occurred I could see a little more of the chick, and on each occasion her consideration for it grew more pronounced. About midday, when the mother had got up, I dare say, for the twentieth time, to see that everything was all right, a great alteration was noticeable. The shell had split in two, and half of the red chick was visible between the two pieces. Then she became extremely agitated. She could scarcely make up her mind which foot to stand on. From the throat of the otherwise so consistently silent bird there came, urged as it were

"It was an Unforgettable Picture, the Little Red Chick Together with the Huge High-towering Bird."

"An Inquisitive Little Fellow . . . Crept Forth into the Sunlight."

by eagerness and anxiety, a peculiar half-suppressed sound, expressive of the sympathy she felt towards this remarkable child, who was so much smaller than herself. With tender solicitude she removed the bits of shell from its moist covering of down, and put them aside, lest they should cause it harm. It was an unforgettable picture: the little red chick together with the huge high-towering bird. And with an indescribable soft, contented, cooing sound she saw to it that the young one, when she covered it with her mother-love again, should come under her breast feathers to dry.

A peaceful hour elapsed. Two o'clock and three o'clock went by. Then something stirred beneath the soft breast feathers. The great pinions were cautiously lifted and an inquisitive little fellow, eager to see the world and quite ready to dry his own apparel, crept forth into the sunlight. Within my mound I put my last plates into the holders, since I felt sure I should never behold the scene again. And when the boat came quietly to land and the crane had stolen away, I left the place as quickly as possible in order that the chick should not be without protection after sundown. As we rowed hurriedly away, there stood the cranes in the far distance on the open bank, sending forth their calls into the

still evening air. Long after the last call had died away its echo resounded from the distant edge of the forest.

Next day rain was falling and I was loth to disturb them. The day after that I saw them for the last time; the last time at any rate in their own wood, which lay in the moor ground of our common native land. When we were creeping forward in the swamp in the morning, we observed the crane crouching and running away. That was my final view of her. Meanwhile, the second chick had been brought into the world, and the elder one sat upright in the nest as if it were inquiring what sort of birds we were. It was palpable enough that within a few hours they would have vanished into the swamp thicket.

I concealed my camera once more under the mound in the hope of at last getting a picture of the two cranes together. But my hope was vain. A change had taken place in the parental duties of ministration. The two young ones were prepared to go out into the world after the mother had patiently fulfilled her duty. The male now took her place. I was astonished when I saw him advancing through the undergrowth. So here again, as in the case of many of the small waders, it is the male bird who takes over the

charge of the tender young ones. The female followed close behind, but it was the male who went up to the nest and called to the young ones, while the hen stayed among the bushes and quietly preened herself. By comparison, the male showed less confidence. I cannot tell whether he had been aware of my presence from the very beginning, or whether it had just become clear to him, today, that everything was not quite as it should be in the swampy wood. At all events, he did not often show himself at the nest. He remained some yards off at the side, and hid himself so craftily behind birch stems and bushes that I found it impossible to obtain a photograph of him. Later, nevertheless, due to pure chance I was lucky enough to get one. He gave a call note to the young ones and the elder chick made reply. It was hungry and the old bird had food in his bill, a larva or a small frog—I could not see what. The female answered and now and again gave utterance to the call note. At last the big young one ran rapidly and with firm steps over the edge of the nest, and disappeared among the birches. Seemingly it had been there once before. Some time elapsed. The other chick was likewise hungry. It stumbled about in the nest and cheeped. The old birds answered. Their

nature was to entice the young ones from the nest as soon as they were able to walk. If they made no response, they merely went hungry. In my hiding place I had already given up all hope of getting a picture of the bird. It could not be much longer before the whole family would vanish behind the trees, leaving nothing but the egg shells in the nest.

Then, suddenly, a crow came flying and alighted on a birch immediately above the nest. The crow uttered that short caw, which signifies that he has seen something to excite his interest. The long necks of the cranes shot up forthwith above the bushes. The male gave forth a sharp rattling note of warning. But the crow paid no heed to it. He at once began to caw inquisitively and flew without further ado to another branch just above the nest, only a yard or two away from the young ones. There could be no doubt as to his intentions; his behavior was characteristic of his cheekiness.

This was more than the father crane could tolerate. He let his suspicions towards me go hang. Like an exasperated bull he charged into the arena. He screamed with excitement, and his ornamental plumes were displayed. The

crow, of course, fled in the greatest alarm. Unfortunately the crane's back was turned towards me and he kept in the shadow, but, as he was leaving the place of combat in all his recovered dignity, I caught him in the camera just at the moment when he was having a look at my mound from above the bushes. The other young one had taken advantage of the opportunity to disappear, and so the play came to an end.

I was sorely tempted at this juncture to creep forth with my camera and follow them, but the thought of disclosing the whole affair to the clever birds, and of subjecting them to a sudden fright, seemed too thankless. I must wait, therefore, until the boat came in the evening. The sun was not quite down. The elder young one had already gained the tangled undergrowth, where the old ones had taken it under their care. Only the smaller one still sat behind the edge of the nest, and looked saucily upon the unintelligible world. But it had plenty of ability. It stood there on its spindly legs like a boatswain, though still apparelled in down. When I ventured to pick it up, it bit my finger with its small sharp beak. I gazed upon the little creature in my hand with the same reverence as if it had

been a rare flower which one might touch but once in a lifetime. So this was the chick of the Kuorga, "the bird that is as big as a man," as the Laplander remarked.

Little chap! Can it be true that only two months from now you will be as big as your parents and ready to set forth on the journey to Africa to see all the wonders there? Will you fly up the Nile and look down on the pyramids, or some day see the tropical plains and the huge beasts of Ethiopia?

A strange thing, indeed, if one were able to follow you, to see how you comport yourself among the negroes and crocodiles and birds, who are so much bigger than you can ever be!

CHAPTER VI

But where do the cranes migrate to when they fly south in the autumn? The marvel of bird migration has been a subject of dispute among men of learning ever since science came into being. It is an astounding thing that the great numbers of birds which bring up their young in civilized countries should arrive there in spring, and vanish again with their young on the approach of winter. And the spectacle of countless multitudes of birds passing across the sky from unknown countries in the north cannot fail to arrest the eye. Their advent, moreover, brings good tidings to the inhabitants of many countries, whose welfare rises or falls in accordance with the coming or going of the birds, so that it is well worth their while to give attention to them.

The explanations of this problem that have been offered in the course of time are more various than the migratory birds themselves. It is sought, nowadays, to explain the

origin of bird migration as follows. It is surmised that, owing to alterations of climate that were gradually brought about during the Tertiary epoch by the advancing Ice Age, the birds were forced to flee from the ever increasingly severe winters.

Thus there arose, firstly, the partial migrants that withdrew farther and farther afield from their breeding places in search of food. Then came the birds-of-passage, which, as a result of their enhanced powers of flight, inherited the habit of flying and even before winter made its appearance flew to countries where there were sufficient food and warmth. Then, the warm season returning, the mating instinct would impel them again to go in quest of that region where they could best raise their young.

Aristotle long since observed that certain kinds of birds fled before winter set in, to return again on warmer winds. Notwithstanding this, he maintained that the stork, the lark, and the swallow hibernated during winter like frogs and snakes.

It is quite certain that the vast myriads of birds have, upon the whole, followed identical lines of passage since primeval times, but it is only during the last decade that a

method has been contrived for laying down some of these routes on the map, though only within very wide limits, stretching over seas and continents. The method employed was to fasten rings on the legs of thousands of young birds and old trapped birds. A consecutive number and address was engraved on each ring. If in the course of years a number of such birds, emanating from the same birthplace, were to fall into people's hands during migration, or come to grief at such and such a place, it would be possible, by drawing lines connecting the two extremes, to establish the general directions of flight which the majority of these birds are wont to follow. It was learned that the greater number of ringed birds did not take a direct line towards the south during the autumn flight, but moved across our continent in a southwesterly direction. This is easily explained, for in following this direction they reached the warmer air currents sooner.

Wading and swimming birds, in particular, followed the coasts of the Baltic, the North Sea, and the Atlantic Ocean so regularly that people began to wonder where those birds were going to which are unfit to spend the winter in Ireland or in the swamps of Spain. Was it possible that they

ventured to fly across the Atlantic like the two ringed black-headed gulls from the Baltic, one of which was taken in Barbados, and the other in Mexico, though no rational ground can be assigned for their having flown there?

So it became the general opinion that the main part of the autumn migration proceeded towards the southwest. From the very first only a small fraction of the ringed birds pursued a southerly or southeasterly course. Among them were birds such as belong to our mountainous districts, from which the inference is drawn that it was not until the glacial period was over that they became immigrants.

But in the case of the white storks, whose thousands of young ones could easily be ringed, their flight was divided into two separate routes. The flight of those whose homes were in Western Europe, or, to speak more correctly, west of the Weser, could be traced with certainty across the Iberian peninsula, whence they probably flew on to North Africa. The multitudes from the remaining European countries pursued their way across the Balkans, Syria, Palestine and Egypt; and to everyone's astonishment were found to have their regular winter quarters in southernmost Africa. In that region, also, some swallows were found

which had been ringed in England, whereas, of the many thousands of swallows which were ringed in Hungary, so far not a single one has come to the knowledge of science.

But which of the routes taken by these various birds was the one followed by the proud cranes of my childhood, from the Öland heath in autumn? There was no doubt but that they crossed the Baltic and the mid-European plain on their flight southward, but what route did they take then?

Among the hundreds of thousands of ringed birds there were only a few cranes. But that was to be expected. Full-grown or half-grown cranes were seldom caught. Even if a young crane were to be found in the nest and furnished with a ring, either the ring would become broken, or the bird become permanently crippled as soon as its long legs would begin to grow.

On one occasion, when an old crane set forth upon his journey with a ring round his neck, he gained historical renown. There was a Russian magnate who, on his estate in South Russia, surrounded himself with birds living in freedom. In the autumn of 1892 he let a crane fly away with a locket around his neck. Inside the locket was a request in

Russian, French, and English, asking the person into whose hands the crane might fall, to send word where the bird had been found. The reply thereto appeared in Slatin Pasha's book, *With Fire and Sword in the Sudan.* For when Slatin Pasha was taken prisoner during the war against the Madhi, he was shown the locket with the script by Khalif Abdullah. The crane had been shot or caught in Dongola during the winter of the same year.

That vast numbers of cranes are to be found in the interior of East Africa during winter, has long been known. To which region of that mysterious continent Buffon ascribes his cranes, when he states that those that have become exhausted are attacked by gorillas, is admittedly uncertain. But, before that, Brehm had seen cranes in thousands on the banks of the White Nile below Abyssinia. They were seen passing in migration over Egypt in autumn and in spring, and they rested there on the sandbanks of the Nile. But could they have been our cranes?

It had come to be a dogma that our far-flying birds-of-passage flew in a southwesterly direction over Spain to Northwest Africa; but all knowledge of their further whereabouts was lost in the sands of the desert. Cranes

"It Stood There on Its Short Hind Legs like a Boatswain."

Cranes Flying up the Nile.

had been seen passing over Belgium and France. In the South of Spain places were known where cranes bred. It was said that cranes were to be found in the coast region of the Straits of Gibraltar.

In order to see for myself what the birds in those countries were doing, I took passage at Toulon in an East Indian ship, with field-glasses in my pocket, and traveled in her as far as the Straits of Gibraltar.

It was the middle of March, and the cranes should have been there. During the same season the following year I, myself, saw cranes by the thousands on the White Nile. I sought for them in vain on the coast of Morocco and along the flat inlet near Algeciras. I traveled through the Andalusian paradise to the Sierra Nevada to look for lammergeyers, back through the flat country to Seville, and from Seville along the Guadalquiver to the swamp district. There at last, I caught sight of two herds of cranes above the endless landscape of lagoons. Countless numbers of waterfowl were here on the move: ducks, terns, gulls; and on the banks, gray and white herons and multitudes of small wading birds. White storks I saw also, but only a few.

I could not bring myself to believe that this was the

country our cranes chose to stop in during the whole winter. The statement that cranes spend the winter in the Mediterranean countries seemed to me more and more doubtful. It was unlikely that more than a small number did so. Why should not the hosts of cranes that were to be seen over Egypt in autumn, and especially in spring, remain at the well-provided tables of the delta and the Nile valley, rather than pursue their way fully twenty degrees latitude farther southward to the tropical Sudan, where the cranes from Asia, as well as those from Europe, appeared to assemble together to browse on the fields of durra?

All the habitats of the crane in tropical Africa known to science lay to the east, [1] in Nubia, Dongola, Kordofan, Sobatland and Abyssinia.[2] As to western Africa, south of the Sahara, nothing appeared to have been reported in scientific books concerning our large birds-of-passage.

In the great belt of primeval forest in Central Africa there was apparently nothing to attract the cranes. Yet, in the interior of Algiers, towards the end of February, the renowned naturalist, Hartert, had observed cranes which were

[1] Reichenow, *The Birds of Africa* (Dietrich Reimer, Berlin).
[2] Single cranes are said also to be found in South Africa.

calling loudly, flying from the south across the desert. And Baron Geyer von Schweppenburg describes in his account of a journey to the Tuaregs in the winter of 1913–14 how, to his astonishment, he found everywhere in mid-Sahara our common birds-of-passage, not only good flyers such as swallows, but also small tender warblers, and poor wights like the sedge warbler, a bird which is otherwise only to be found close to water. And when he reached the spot in that little-known region, the Hoggar highlands, where the expedition had to turn back, he saw not only numbers of our best known small birds—such as wagtails, stonechats, nightingales, redstarts, and bluethroats—but likewise the white stork, and such birds as the woodcock and the water-rail, which frequent our lakes and streams and fly along the shores or waterways.

That all these birds had not spent the winter in the dry desert mountains is more than likely. Many of the small birds appeared to be tired as if from a long journey. Where then had they come from, and where were they going? Might they not have been following that line of mountain massif and oases which cuts across the basin of the Sahara from the northwest corner of Africa, and extends to Lake

Tchad and the Western river terrain of the White Nile? This same line they may have followed even before the Tertiary period: at all events at some bygone time, and it lay very near to what was then the south coast of the Mediterranean.

Was it possible that one division of the great stream of migrating birds which, as far as we know, flew southwestward from the northern countries of Europe, pursued quite another course when they reached the end of the continent? Did they follow, perhaps, the same line as their kindred did ten thousand years ago when the positions of the sea and the desert were not as they are now? And if our cranes, instead of following the storks along the Nile, joined the migrating stream to the southwest, may it not have been possible that they reached their tropical place of assembly in the Sudan? If a nightingale and a small warbler are able to fly across the Sahara, it would assuredly not be impossible for a crane to do so. Deserts and high mountains would probably present equally insignificant obstacles to them.

The naturalist Radde observed them flying over the summits of the Caucasus, which are more than 4000 metres in height. Przevalsky reports from Asia that at a height

of 4500 metres he saw cranes flying so high above him that he was scarcely able to recognize them.

All these are questions for time to solve. On the other hand, it is certain that the chief winter quarters of the cranes in Africa lie in the district of the White Nile. Which crane hailed from Russia, and which was the one that I had held in my hand as a small red chick in the South Swedish wood is, of course, beyond anyone's power to distinguish. After all, it is just as likely that our cranes should travel to the Sudan as that our storks should spend the winter in Southeast Africa.

So I gave up pursuing my quest any further in Spain, took some cameras, and set forth for the Nile, in order to see where the cranes migrated to.

CHAPTER VII

The first glimpse of Egypt that the birds-of-passage behold consists of the blue-gray earth and the green fields, which gradually narrow down towards the South into a smaller and smaller angle until they are hemmed in between the gold-red mountains of the desert. Scarcely a rain-cloud is to be seen in the sky the whole year round, but the earth below is covered with a gleaming net of water channels. The number of straight narrow canals dug by human hands is countless; and the broad branches of the Nile wind sluggishly through the delta. As these branches approach the coast they spread out into large shallow lagoons, which are separated from the sea by sinuous tongues of land.

Here there are no woods for a bird to rest in or to shelter him from the burning sun; nothing but scanty groves of date palms with bare trunks and evergreen fruit gardens, where mandarin and other oranges glisten like golden apples throughout the whole winter. Such a thing as a thicket, in

which a small songster might take refuge, is scarcely to be found. But in the fields the sugar-cane grows during winter into thick jungles and on the swampy banks of the lagoons the reeds stand higher and denser than in any of their northern growing places. The birds that arrive during the day-time seek out with sharp eyes the most inviting spots. When they are accompanied by old ones, they know their way about. Young birds that have had to set forth at their own peril look out for localities like those they were accustomed to at home. They seek companions of their own species, with which they can associate. Sea-birds settle down in flocks among pelicans and pink-colored flamingos. Ruffs and small waders are attracted by the rich boggy ground alongside the canals. Wagtails and other small birds gather together where the cultivated land joins the desert. Flocks of peewits alight on the fertile fields where white buff-backed herons walk about unconcerned among the heavy grazing buffaloes. The storks that have left Jericho and the Jordan a day's journey behind them, repose upon the mud-banks of the Nile, and here, too, the cranes sometimes rest awhile.

But all birds that arrive during the night follow the

route prompted by their own inner feelings, and listen for the voices of other birds down below who arrived the night before and are now quarreling among themselves for room, or seeking food after their long journey. Water-rails and moorhens find their kindred again in the reed-beds. Snipe drop down like stones from the sky on to the swampy places. The little quails, who flew across the Sinai desert in the dark, make haste to hide their tired wings in the green fields before the day dawns. The wild ducks, who perceive the water, dash down everywhere where its surface gleams upon the dark earth.

Most of the birds stay but for one night; perhaps over the following day: possibly a week, in order to rest themselves. This country is not warm enough for them. For many of them it is only the beginning of their journey. A longing burns within their breasts for the tropical countries on the far side of the Nubian desert, with its bare gloomy mountains. Here the White Nile resembles a flowing sea, now that the rainy season is over. On its muddy banks, the crocodiles sleep peacefully while the birds stand watch over them, and the hippopotamus wanders about through the papyrus beds. And here the black men leave so much

Bird's-eye View of the Nile, the Delta, and the Mediterranean.

In the Promised Land.

durra behind them on the fields that the cranes can support themselves on it throughout the whole winter, without bringing the food supply to an end.

Flock after flock sets forth. At evening twilight those who fly through the night set out. At dawn the others begin. They keep on flying until twilight sets in again, or the sun rises. Many of the small birds fly a short stretch: find some food; rest awhile; and again set forth on their journey. Flocks of waterfowl follow the Nile, which divides the land towards the south into two ever-narrowing strips of cultivated land between stony deserts. But storks and cranes soar up into the cool heights where the unresting migratory stream is moving towards the tropics. Down below, the Nile winds its way like a narrow shining ribbon, and in the east, behind the desert mountains, the Red Sea lies like a broader one. And they rise up and disappear from human sight and follow a road known only to themselves.

On the next day and the following night, in the succeeding week, and the next month, more flocks continually arrive and alight upon the oasis between the desert and the sea, which is known as the land of Goshen. They rest, pass

on again, and are replaced by others. For Egypt is above all else an oasis on the broad caravan road of the birds-of-passage leading from Asia and Europe. It is a large station at the entrance gate to Africa from the Mediterranean and Asia Minor, where, throughout the whole autumn, fresh flights are continually pouring in. Here the travelers stop for a short rest to appease their hunger before the flight moves on again to the next place, and the one beyond that. At last the many millions have passed through and the flight comes to an end, while the Nile gently falls, and room for the ever-increasing flocks, who intend to stay over the winter, becomes more and more restricted.

The water in the thousands of canals is draining away. The rich mud, in which the waders yesterday found nourishment, is today dried up. They have to fly about and find new feeding places. The countless wild ducks have less and less room in the swamp, fewer places to make a stop at. They gather together where there is enough water in the lagoons of the delta district, and on the last shallow stretches of water near the desert, where no feluccas sail past and no paddle steamers make noisy commotion. In those places there is to be heard a medley of voices from other countries

and other continents; voices of small waders from the shores of the Arctic Ocean, of peewits from the lowlands of Germany, of herons from the Hungarian forests, of gulls from the Baltic and Black Seas and the ringing cry of a large greenshank who came perhaps from the mountains of Sweden. But above all else there are ducks; flying ducks of every description: from the river districts of Central Europe, from the lakes of Lapland, and the morasses of Russia.

In truth, the Arab and the donkey, who are carrying my paraphernalia at dawn across the desert sands, are the only Africans among all these living beings. A straggling train of small white herons comes flying across the field. They, too, are Africans. Their shoulders, decked with white ornamental plumes, glisten in the sun, which is rising above Cairo's misty smoke, gilding the tops of the pyramids. A flock of long-necked swiftly-flying ducks rushes past them as if in play. Their breasts shine as white as the plumage of the heron. The movements of their pointed pinions call to mind the lanner falcon who lives in the wall of the Chefren pyramid. They sweep across the still waters and rush past the reed-bed again into which I have crept. They

turn, sink down, mount up, all at the same moment, as if by word of command.

It was in just such a manner that they used to come in flight to my native coast in autumn, and in the spring when the ice broke up on the rivers of Lapland. Among the multitudes out yonder, there is something peculiar about the appearance of these ducks that catches the eye. When they are flying in that manner they look as if they were framed to fly just as far as they desire over land and sea.

The Egyptians of old noticed this, too. The idea must often have occupied their thoughts. For it is a singular fact that of all the many envoys who, thousands of years ago, visited the courts of the earlier dynasties in Egypt, not one of them appears so often in the inscriptions engraved on the speaking stones as the homely pintailed duck from the then unknown countries in the north—Russia, Finland, and Sweden.

Whether it be in the tomb passages of the pyramids, on the columns of the temples, in the granite of the obelisks, or among the cryptic hieroglyphs of the papyrus manuscripts, this duck is everywhere to be found. He is graceful of form, unmistakable, with his dark head, his thin white neck, and

the swift, pointed pinions. There can be no doubt that he was the prototype for the sign "son of the sun" in the cartouches of the mighty Pharaohs. Where the bird was deemed worthy to figure as the hieroglyph for the conception, "to fly," the characteristically pointed tail feathers are spread out in the feathered sun rays, and so skilfully represented that, whoever has once seen them, recognizes at once that here is the northern pintail duck, and no other.

How did it come about then that this wild bird in his simple white gray and brown attire, should have aroused so much interest, compared with his larger and gayer-colored relatives, in a land where he was only a passing visitor in spring and autumn? In our northern countries there are but few people who have ever set eyes upon this bird, or who know that during the bright summer his home is in the lonely waterways of Lapland. On the masterly wall-paintings of the Egyptian tombs, where kings and persons of high estate are to be seen engaged in sport in the papyrus beds of the Nile, this was the favorite bird. The court painters of that time never forgot, when they depicted the slaves gathering up the spoils of the chase, to portray them with these northern wild ducks in their hands. They rendered

them as unmistakably as the lotus blossoms, which the high-born women carried in one hand, while with the other one they held back, apparently, the over-keen bird hunter or fisherman. On the temple walls of Abydos, where odd-looking gods with beasts' heads are seen engaged in catching birds in the papyrus jungle, the fluttering wild ducks are none other than our pintails, easily to be identified by their pointed ornamental tail-feathers. They are portrayed as in the hieroglyphs, with extended wings, one wing always above and one below. Of the myriads of other water-birds, other ducks, wild geese and swamp birds, whose species are sometimes more difficult to identify, but which belong to the multitudes that find their way to the watered valleys of the Nile, during the cold northern winters, our pintails far surpass any of them in number.

Considering that Egypt is poorly provided with bird life—migratory visitors excepted—and that the same conditions in this respect undoubtedly prevailed in former times, it is easy to understand that these thousands of visitors must have excited the attention of the people of Egypt. There are, indeed, only a few of Egypt's countless species of birds which make their homes in Africa and stay there

to bring up their young when the hot summer of Ethiopia draws near.

Of the fourteen kinds of wild ducks which swarm among the waterways of the Nile, it is significant that only a few of one single species stay behind and nest in the country when spring comes round again. A few spur-winged lapwings on the Nile banks, small herds of white buff-back herons on the fertile fields, little birds in the sugarcanes, solitary hoopoes and white-mottled kingfishers, palm doves, common kestrels, Egyptian kites in thousands, and an occasional white-headed vulture up in the desert mountain ranges—these, among the indigenous birds of Egypt, are the ones which chiefly attract attention.

It was probably just the same when the pyramids were built and there was nothing, as far as these birds were concerned, to excite the sporting ardor of the mighty ones in the land. But when the waters of the Nile subsided and the winged myriads reappeared from Asia and Europe, the land of Egypt became, for the space of some weeks, a country as fabulously rich in bird-life as it is today. Then the Pharaohs set forth for the chase in boats magnificently adorned and the slaves fetched the fallen birds from the papyrus beds,

while the princesses plucked lotus blossoms, with which to brush away the flies. The paintings of these wonderful ducks are as fresh today upon the walls of the tomb chambers in Sakkara as are the living birds themselves, when they are flying over the waters bordering the desert or swimming in the mirrored reflection of the pyramids.

They lie there in flocks by the hundreds. Small straggling parties come flying through the mist of the still morning over the palm groves by the Nile; shovellers, teal, widgeon. Just as in days of yore the aspect of land and sky became altered by the incoming of myriads of birds, so now the watered parts of Egypt are transformed into a strange, foreign territory by their presence, their cries, their movements, and the rushing sound of their wings.

Where now the flood waters of the Nile are subsiding day by day, the swampy fields are not very different in appearance to the flooded pasture lands on the coast of Holstein, or a moor in Pomerania. The white plumage of the herons and the burnished heads of the red-necked crested grebes glisten on the clear water. A peewit trips about on the mud looking for food. When he has found something he pauses for a moment and assumes a distrustful look.

Looking Down upon the Sphinx and the Pyramids.

The Wild Ducks Arrive.

But some greenshanks, that come flying across the meadow ground, hail apparently from a less civilized home. They alight upon a mud-bank only a few steps distant from me and seek for food without the least regard to the men whom the peewit eyed so suspiciously. A moment later they rise screaming in the air, and with them a flock of frightened ducks. A shadow passes over the water, a large bird circles over my head—the marsh harrier! Him they know.

He stands out pitch-black against the sun, but it is not worth while to elevate the camera, although he is so near that I can distinguish his piercing bright eyes. With a few powerful beats of his wings he rises up and soars in wide circles towards the desert border, where the great flocks of ducks rove about or take their rest.

Birds-of-passage everywhere! Nothing but birds-of-passage! Too many to be counted, but almost all of them have their homes up yonder, where now cold winter reigns.

The hours pass. The sun is burning hot. As I lie there hidden in the reeds, listening to their well-known voices and looking at them in the finder of my camera, it is only the golden hills of the bare desert and the reflection of the pyramids in the water that keep bringing me back to the fact

that it is winter, and Africa; and not, as the scene might well suggest, a sunny day in spring by the waters of my far-away northern home.

The difference as compared with Europe is so very slight. This, it is true, is only the threshold of the immense winter quarters of the birds-of-passage towards which there leads a maze of roads, roads which, after all, we know so little about. But even the little sandpipers roaming about here on the mud, that were hatched perhaps during the summer in the Siberian tundras, possess this peculiar sense, a sense that our minds can never grasp. They harbor no doubts in their little heads about the road from their native land to the tropics.

CHAPTER VIII

The apostle of civilization who sets forth for Africa, for the purpose of slaughtering elephants, will scarcely deign to cast a look at the little northern swallows that flit about his camp and chase away the mosquitoes from his precious head. Of the thousands of Europeans, who go on pilgrimage to the pillared temple of Thebes, with its once hundred portals, only a few will catch as much as a fleeting glance of the snipe on the sacred lake.

Here on this lake, perhaps, King Thotmes III kept, for his eyes' delight, some of the rare birds that were brought back from his campaigns in Asia, birds which are still preserved in those magnificent zoological gardens that he caused to be engraved and painted on the temple walls above the shore. Perhaps eider ducks swam around the vessel on those occasions when the image of the bird-headed god was ceremoniously carried forth upon the water. And in those times, perhaps, the plainly attired coots dared not let them-

selves be seen. Nowadays they are habitual residents. But beyond all question the snipe, when they came rushing over on autumn nights, espied the bright surface of the water and forthwith sought hiding-places for themselves on the quiet bank, as they still do today.

It is a place of peacefulness. Between fallen walls and overthrown columns the water stands dark and transparent, like an immense spring. There is not a single tree to give protection from the sun. He who, on a fiercely hot day, is being shown over the temple by one of the seven-and-seventy dragomans, hurries along as quickly as possible to gain the shadow of the colonnade, casting as he goes but a fleeting look at the lake below the overthrown obelisks. And he who follows down the steps to see the giant scarab cut out of granite, the snipe are the very last things he is likely to give a thought to. He is much more bent upon picking his way cautiously among the stones, where scorpions creep; and where, perhaps, one of Cleopatra's asps raises itself up to hiss at his foot.

A small flock of wild ducks swims out and flies away. Some coots splash in the water and quarrel among themselves, as if they were at home here. Nothing else is to be

seen. Glistening in the rays of the declining sun the emerald-colored bee-eaters flit around the columns of the ruins.

But go there in the early morning before the golden light has reached the far side of the Nile, where the Kings sleep at the foot of the mountains, and the vulture rests above them on the crag. Wander along between palms and sphinxes through sleeping Karnak where the hoopoe, just awakened, mimics the barking dog. The wild-ducks that are coming from the Nile to rest upon the sacred lake point the way.

Growing there in the shallow water by the bank is a verge of undergrowth. Lie down there in the grass and wait awhile. That may seem a hard thing to do. I persevered at it there for two days and the friends of the bird-headed god repaid me well for my trouble. Who would have thought that so many little winged visitors from northern countries would assemble here in this corner near the walls of the silent town?

The morning was so quiet that one heard the echo across the lake when the raven called to his young ones in the column capitals of the temple. Out beyond, where the re-

flections of the obelisks in the water seemed to touch the very bottom, the coots were already diving for food. Some small wading birds that had been roosting all night on the bank flew in the gray morning light to the other side of the lake before I could identify them. But a twofold note that came from their direction announced to me the presence of a pair of wagtails, who were recalling to themselves the summer and the brooding time on the barren shores of their home. As the time passed by, and my Arab on the bank disappeared, all the birds came back along the shore, one after the other.

First of all the wagtails. They had not flown away out of fear but were making, it appeared, a sort of morning round along the water's edge, intent upon flying insects. The male was black and white and the female pale gray. Perhaps they are going to mate. They followed each other about so devotedly.

Then came the sandpipers. They belonged here and wanted to return to their own part of the bank. One of them vanished again. The other took his morning bath, while a small ringed plover came along and kept watch. The little rogue of a sandpiper swam like a duck. Then he

jumped up on to a stone to preen himself. As he stood there, his image reflected in the water, the thought passed through my mind that perhaps he was the same one that was snapping at insects in the crane's nest just at the time when the tawny young one was crawling out of the egg, and the crane came forward from the bushes and looked down at the little visitor. But that of course was pure imagination. The migratory birds of science are only allowed to fly towards the southwest, excepting when they fly elsewhere; the sandpiper was born in Kashmir and therefore understood no Swedish, if I had wanted to speak to him.

Then there came another ringed plover who bathed himself while the first one still kept watch. It appeared as if standing on watch was his vocation, but it was merely his curiosity. He was so observant and took such a keen interest in all that was going on. When my kinematograph began humming, he came towards me and bent forward with listening ear. He was so near me that I could scarcely get him into focus in my camera.

But the snipe? It was not until all was quiet for some time that they appeared.

First there came a small bird, smaller than the plover.

I was quite taken aback when I directed my camera at the spot where he alighted on the bank. Was he, too, staying here—the little stint from the tundras on the coast of the Arctic Sea—for the sake of whose precious eggs an English collector once fitted out a costly expedition?

What a distance he had covered with his small pointed wings? But, far from being tired, he was eagerly hunting for food.

His is a quite different disposition to that of the inquisitive ringed plover. Probably there is not much on the Siberian coast to excite his attention. He tripped about with a deliberate air in the shallow water. Then he espied something. He stood upright on his match-like legs and took aim at something with his toy beak. And then he set about boring for microscopic prey in the mud till the water splashed.

Presently there came a clapping of wings above us. A palm dove from the date grove at Karnak alighted to drink. A more confiding creature it is scarcely possible to picture, but the little fellow took fright at something. With a delicate purring note he spread his wings and flew away like a butterfly.

The Sandpiper and the Ringed Plover Take Their Bath in the Sacred Lake.

Flocks of Ducks Passing Overhead.

Coots.

It was then that I first detected the snipe. Something stirred beyond at the foot of a bush. A mottled bird. He was boring into the mud like the little fellow. But his beak was a long one. It was the snipe; the "sky-goat" of my home.

He came closer to me and looked cautiously about him with his large dark eyes. Then he walked into deeper water by the bush until he could just touch bottom with his long bill and there he became so deeply absorbed hunting for food that at times only his back and eye remained visible.

At the same moment another one came into sight underneath the bush. It must be his mate, I thought to myself. But then I had an even greater surprise. It was a jack snipe; a bird whose abode is in Lapland, eastern Russia and Asia. He does not arrive in Sweden on the autumn flight until the other swamp birds have long since passed on to warmer countries.

And here he was. The two must have come across each other during their southward journey and have struck up an acquaintance, for they were seeking food together as faithfully as man and wife. The small one was neither vigilant nor experienced; evidently he had not come from a

country where human beings live. The large one became suspicious. He caught sight of the eye of the camera, an eye as bright and large as his own. Aware that all was not quite as it should be, he began to show uneasiness. Presently he ran hurriedly away and disappeared under the next bush.

The small one, however, was quite unconscious of all this. He bored away quietly in the mud until the wagtail came and—I don't know why—scolded him as if he had been a bird of prey. He looked up as though confused, seemed suddenly to realize he was all alone and in danger in a foreign land, and with sudden decision ran in the direction where he might find his companion.

For a long time the shore remained vacant. Resounding from the temple ruins above came the monotonous voice of the dragoman, who was approaching with his American flock of sheep. Then a little bird passed as quickly as a mouse across the bank. At the same instant I realized what that familiar note was, the sound of which had forced me to listen to this song over and over again in the early hours of the morning. Here was a creature rehearsing string music too tender and delicate for human hands.

The Sandpiper and His Reflection.

The Little Stint from the Shore of the Arctic Ocean.

"The Large One Became Suspicious."

"With Sudden Decision Ran Where He Might Find His Companion."

The bird had been singing the whole morning in the bushes, and I had not recognized it. And now he sat for a moment so close to me on the bank that I could see the red spot on the blue breast and the blue throat. He was the nightingale of the mountains of Lapland, to whom Linnæus gave the specific name *suecica*.

His colors are not so bright as they were in the Spring when he was courting his wife in the midst of the last snow-drift. His note is not so full of the liquid silver ring. But when he flitted around as nimbly as a mouse in the grass and practised his song on the bank of the sacred lake, it was still the same little bird with the great heart, who sang throughout the whole sun-clear night beside the camp fire in the cold country.

CHAPTER IX

So this was Egypt! Bird-life here was not overplentiful, except on the lagoons near the coast where I could not use a camera because it would disturb them.

No flocks of birds were to be seen the whole way up the Nile Valley. Among the indigenous birds of the country the ones that chiefly attracted notice were the small white herons as they flashed into view on the green fields or sat in the tree tops in the parks at Gizeh. Also striking were the Egyptian kites that floated above the towns and villages or sat screaming on the roofs and built their nests in the trees. Besides these a few pied kingfishers hovered over the canals, red-glistening palm doves flitted about the gardens and hoopoes with high feather crests hopped by the roadsides together with a kind of crow that was exactly like our own crows. Taking his rest among the kites on the bank of the Nile during the midday heat was a solitary vulture. That was really all.

Where was the Egyptian goose and where the sacred ibis? According to the pictures painted many thousands of years ago they were more numerous in Egypt then than they are now. Did the ibis ever live in a wild state in this country? Men of learning have their doubts. For anyone with the requisite knowledge the wonderful paintings of animals, and particularly of birds, provide a perfect record of the birds-of-passage in Egypt thousands of years ago. The Egyptians, indeed, possessed a greater fondness for birds than any other people.

Portrayed on a painting from the pyramids at Medum are six wild geese. This painting, that is fully equal in careful draughtsmanship to the illustrations in modern scientific works, leaves no room for doubt that the pair represented on the left hand are white-fronted geese, birds that are native to North Russia and Siberia and are even now the most numerous of all the migratory geese that visit Egypt. It is quite natural to suppose then that this bird was easily accessible to the artist. But the pair on the right with the clearly defined spots and bands is the red-necked goose who nests at the mouths of the Siberian rivers on the Arctic Ocean. It is a species of which as far as is known only a

single example, taken near Alexandria in 1874, has been found in Egypt. Were these masterfully portrayed birds actually birds-of-passage? Were they brought by hunting and bird-catching parties to the palaces of the Pharaohs and priests? Or were they, like King Thotmes' birds on the temple walls at Thebes, carried home in triumphal procession from the subjugated countries? There may have been other possible means by which the Egyptian artists gained sight of them, but it is conceivable that they were brought as presents to the Pharaohs by vassals and princes from the countries to which the birds belonged in the same way as the wild beasts were once brought to the Cæsars at Rome. On the other hand the fact that the white-fronted geese are represented along with these others would seem to indicate that the latter were winter visitors at the time of Cleopatra. The question will probably remain unanswered but a short glance at the Egyptian tomb and wall paintings is enough to show that they are all very valuable records of the birds-of-passage of ancient Egypt. This bird-world depicted in the dwellings of the dead is certainly much richer and more fascinating than that of the Nile in the Egypt of today, where crowds of steamers have taken the

places of the pleasure galleys of the Pharaohs, and where more ornamental plumes are to be seen on the ladies' hats than on the backs of the egrets.

Judging by the old accounts people were inclined to picture the Nile as a broad and mighty stream whose opposite bank glimmered in the distance; a Nile where pelicans fished among the lotus blossoms and white storks strutted leisurely about in the mud to catch frogs while ibises occupied the islands where the papyrus reeds grew.

But nothing of that sort is to be seen. Are there then no storks here in winter? And where are the cranes? In vain I scan the bare banks of the Nile with my field-glasses; the shallow shoals in the water where there is certainly sufficient food for storks; the fertile fields where new seed is always ripening and where, assuredly, there is more for a crane to eat than on the fields of Öland to say nothing of the poverty of the Lappish moors. The ringing of storks has established beyond doubt the route taken by these birds-of-passage to South Africa. But I carried such a lively recollection in my mind of the legend of the storks spending the winter in Egypt that I expected to see at least one. There stands a white bird. How large he looks! No, that

is a buff-backed heron. Another one circles overhead. He has black on his wings and flies like a stork. But no! He is only one of the black-and-white vultures. Never once a stork. Not a sign of a crane.

Where were they all?—On the White Nile? It was winter now in Egypt. Had they merely passed by here hastily in the spring and autumn?

But where then was the sacred ibis and the flocks of geese that were sacred to Isis? And where did the celebrated papyrus grow, upon which all this knowledge in hieroglyphs is recorded? Were they all to be found on the White Nile?

There were no more birds-of-passage to be photographed here, so we packed up our camera apparatus and 20,000 feet of film, and set forth for the White Nile. It was one day to Assuan, three days by Nile steamer to Wady Halfa, and twenty hours in a white train with darkened sun-windows across the desert to Khartum, where the waters of the White Nile and the Blue Nile meet.

This last bit of Egypt opposite the cataracts is a poor country for birds and becomes ever poorer towards the south. The green belt about the river grows narrower and

The White Herons.

THE BLUETHROAT; THE NIGHTINGALE OF THE MOUNTAINS IN LAPLAND.

THE SACRED IBIS.

narrower, the thin strip of irrigated fields becoming more and more threatened by the advancing desert sand. The cliffs on the mountainsides close in nearer and nearer upon the valley, until at Assuan the Nile becomes so squeezed in between them that one might almost think they intended to hinder it from streaming into the cataract, where the rushing water strives to find its way between strange polished blocks of granite that look like petrified monsters.

Here, properly speaking, Egypt comes to an end. The Nubian mountains enclose the dammed-up Nile in a gloomy lifeless frame. Nothing but the tops of isolated date palms indicate that here was a bank covered with green growth. The friezes of the colonnades of Philæ reveal the site of the temple city, a city that vanished when human beings erected the gigantic Nile dam. Today the banks of the river are two days' journey inland from their original banks.

The first glimpse of this desolate landscape suffices to convince one that here is no place for birds. Little blue-grey rock-swallows, a few kites and vultures over the mountains and the tracks of jackals and hyenas are the only manifestations of animal life. A journey up the narrow river confirms one's expectations that it has no great at-

traction for birds-of-passage. No migratory birds in countless numbers, as one might be prone to imagine, are to be seen here following the course of the Nile through the desert towards the tropical countries. Twice I made this long three day journey up the river: once in late winter, when the first ducks were already passing northwards through Egypt, four flocks of ducks, consisting of scarcely more than a hundred birds in all, and some grey herons on the bank, were the only birds-of-passage that I saw. The other occasion was in spring. A few days earlier the whole sky had been covered with storks flying north over the White Nile, pursuing their way across Egypt and the valleys of Palestine. A pair of grey herons was still there. A few flocks of gargeny teal passed along the stream towards the North. But storks—not one did I see. Which way had they gone? I cannot say. But it is my belief that where the Nile makes a bend in Berber-land and Nubia, the path of migration leads straight across the desert from the White Nile to Dongola and from there overland to Lower Egypt. It is certain that the greater part of the migratory flight then follows a course on a broad front towards the Red Sea, and thence moves northward; while the others take a

route straight overland just as those millions of birds-of-passage do which, notwithstanding earlier views on the subject, almost certainly cross the Sahara in a northwesterly direction on their flight towards their European homes. But that, after all, is only a conjecture of my own, a conjecture that was strengthened when my attempt to follow the birds in an aeroplane taught me how freely they can survey land and sea from their airy heights.

CHAPTER X

Our train tore onward across the sun-scorched wilderness. African vultures soared in a cloudless sky above the desert where the heat glowed so fiercely that our eyes were scarcely able to bear it. Nimble gazelles rushed past us at a gallop. At length I caught sight of a flock of swamp birds as we neared Khartum, the city of Kitchener's fame and his war against the dervishes. It lies between two rivers and is bordered by three deserts. Here there is nothing but desert after desert. Occasionally, it is true, one comes across a hollow filled with parched grass and thorny scrub and thirsty stunted trees. But apart from that there is nothing else but desert whose sands when storms portend the rainy season in April and May, may at any moment be whirled up in the air.

Through this country flows the Blue Nile. From the high mountains of Abyssinia it plunges down to the level country. During the wet season it rises as much as twenty-

six feet, and in autumn sinks to a narrow streak of dark transparent water. At Omdurman it joins the White Nile, which comes rolling calmly but forcefully from the immense African lakes, carrying the pale mud from the tropics through the desert to far-off Egypt and the blue Mediterranean. Here is a spot which thousands-of-millions of birds have sought—this paradise of theirs on the White Nile. There is scarcely anything more striking in the whole of Africa. When the vessel has been brought round the bend of land at Omdurman and sets sail up the White Nile it is as if one had passed through a door leading from an empty silent room into an overcrowded one. At any rate so it seemed to me when we sailed upstream in the *Amira,* our proud dahabiyeh.

A few words will serve to describe how it fell to my luck to come across this friendly ship. It would afford scant interest were I to relate the difficulties I encountered. Had it not been that my English friend was able to work wonders with the authorities during the few days left to him, before malaria compelled him to return to Europe, I should inevitably have been left at the mercy of the natives and might have had to stow my apparatus in a frail

African canoe. For the cost of a shooting-steamer, without maintenance charges, was $100 to $150 a day, and to that amount had to be added any other such minor expenses as might be due for expeditions over unknown ground. It was then that we found the dahabiyeh, a sailing craft. With that discovery my way was made clear to me, for had I not as a youngster stalked diving ducks with a gun in the Baltic? By sailing rather than by steaming up the river it would be much easier to get close to the birds. Nothing remained but to cross over the river to inspect the galley. She exceeded all my expectations. A luxurious craft, dating from the days of the Khalifas, with spars like those of the *Shamrock* and a sternhouse like that of a Spanish galleon. Only a little more than thirty dollars a day, including a cook and maintenance, a crew of seven men, and our guide, "Mohammed." More of him later. I doubt if anybody in Europe would have given a hundred dollars for the whole barge. But in the land of the elephant hunters a sailing barge with a bathhouse possesses a value beyond belief. It was only to be hoped that she was capable of sailing up-stream.

Such then was the *Amira*. "Mohammed," who had

THE "AMIRA."

The Great Egret Fishing.

Mohammed Feeds His Lambs.

traveled far by land and sea, and had been the guide of dukes and cotton kings to the haunts of the elephant and white rhinoceros, assured me that she was the best sailing vessel on the Nile. And the truth of his statement must be admitted by everyone who has seen her. To relate my experiences in connection with her sailing ability would occupy a whole chapter. And so, too, probably, would Mohammed's experiences with "the crazy white man."

It began when he was loading my fifteen cameras and various tropical trunks aboard, which he believed to contain powder and gunshot. When everything had been stowed away, he came and asked me where my guns were. I had already, more than once, tried to explain to him:

"I have no guns, Mohammed. We shall merely sail after birds and take photographs."

He knew quite well what photography meant. He had already shown me the relics and portraits he had got from some well-disposed duke or other, and from the "richest American lord" in the world. But in spite of all this the thing was not clear to him. He went on with his work, giving orders to his crew with the severity of a sergeant-major, then came back and quite earnestly put the same

question to me again as though he had never done so before. And then I drew a Browning from my trouser pocket, a heavy .45, and told him that, in my judgment, this was the sole weapon we should require.

Mohammed cast a scornful look at this means of defence and ventured the remark:

"Many leopards on the White Nile, sir, and many buffaloes. And buffalo think you look for him with the little case and buffalo become very angry."

It was in vain that I replied that many thousands of natives roam about without a gun, and without "buffalo become very angry." He merely shook his head.

"But you are white man, sir. Buffalo don't like you."

With that I was no longer able to conceal my contempt at Mohammed's lack of comprehension. He looked at me searchingly. Was this white man then a pure simpleton, or might it be that he was not all there? With stiff gravity he repeated the answer that I used to get from him a hundred times a day:

"All right, sir!"—and turned his back.

I would willingly give a few piastres to have in writing his explanation of the matter to the others.

So this was how we obtained our boat in which we were towed round the bend of the river at Omdurman, where the clear and dark volumes of water meet and flow side by side like two sharply defined rivers. The dahabiyeh spread out her wings and the north wind drove us forward to new lands and new birds.

CHAPTER XI

The cranes! The cranes at last! Our proud handsome cranes from Europe, white-winged crowned cranes of Africa, lovely pearl-gray demoiselle cranes from the steppes of Asia, cranes in myriads scattered over the millet fields, flying phalanxes of cranes in the cloudless tropical sky, and cranes in countless multitudes on the banks of the White Nile!

They assemble there when day draws near its close, when the sun for the space of a minute flames up through the mist on the horizon like a burning torch before it dips beneath the rim of the desert. The rushing sound of their wings comes and goes like the murmur of the wind on the river. The loud clamor of their voices as they fly with necks outstretched reverberates like the battle cry of wild hordes from foreign lands. And hordes, in truth, they are; hordes from far-away continents which, when the dry season arrives, muster in bands and descend upon the river

district of the White Nile to fatten upon its ripening vegetation.

I shall never forget the hours between sunset and sunrise the first time I sat awake there in the midst of them. That strange African night: the air filled with the tumult made by thousands and thousands of birds; and the coming of daybreak, when their shapes loomed up around me in the gray light of early dawn.

We had been sailing the whole day long. The strong northerly breeze died away at sundown. The dahabiyeh glided quietly up the river which, towards the south, spread out to the horizon like a sea. From the bow where the crew were roasting a kid wafted an unfamiliar odor of wood smoke. On the roof of the mosquito house I had made a sort of bird's nest where I ensconced myself with a pair of field glasses and some books. But I did not get far with my reading. Birds were swarming everywhere. Singly, in small groups, or assembled in flocks they passed onward in flight or crossed the river to the opposite bank. Their numbers increased hour by hour. Beginning with hundreds they increased towards evening to thousands and tens-of-thousands. From individual bird cries which

seemed to fill the whole air the clamor of voices gradually swelled to a continuous roar. Towards the west I could see with my naked eyes that the land above the shore line, as well as the mud-banks, was covered with myriads of birds. In the lagoons that lay between water-fowl sat crowded together like floating islands. We had arrived at that belt of country which has earned for the White Nile the reputation of being the richest watercourse for birds in the whole world.

The sun sank and the wind suddenly died away. It became so quiet that one could hear the peculiar beat of the festal drums from remote Sudanese villages. Presently there rang out above the babel of voices proceeding from the next legion of birds an altogether new sound. It was a distant sonorous call. My field glasses were of no avail. The dusk had advanced too far to enable me to make out anything. But there was no mistaking the voices! It was the trumpet call of our proud cranes coming nearer and ringing through the still night under the stars of a foreign continent.

All this happened at a moment when the strange jargon of the men around their fire forward had possessed me

On the White Nile.

The Richest Water-course for Birds in the World.

with that sinister sense inspired by the unknown. And then from the medley of Africans and Asiatics on the river bank a small redshank uttered his familiar cry. Perhaps it was the same bird that occupied the grass mound on the sunny coast near my home, who called so trustfully to his mate every summer by my bathing place.

And now here were the cranes! The books and field glasses were flung upon the deck. I called to the dragoman, my Nile guide, and demanded the felucca with two men to be got ready for rowing me ashore. I pointed with my hand in the direction I wanted to go, the direction from which the bird calls came.

Mohammed regarded me with a puzzled look. This was a new move on the part of this odd man without a gun.

"To row ashore out there!" he protested with flat upturned hands—that gesture of the hands is not peculiar to the inhabitants of Palestine—and he shook his head. "S'impossible, sir! Is lotter (a lot of) mud there. S'impossible to come on the shore, sir!"

I looked up at the rigging. The huge sails were still filled, though the breeze was too light to be felt, and the

dahabiyeh moved forward as though there were no current in the river. So I gave in, had my tea, and disappeared below deck. The chain rattled as the anchor was let go. Gradually the chatter of foreign voices outside became silent. The noise from the shore grew less, but it never for a minute fully ceased. I tried to read Colonel Roosevelt's book about all the animals he had to shoot in Africa in self-defence, but the trumpeting of the cranes outside was so loud that it drowned even the voice of the American president.

Sleep was out of the question. I pulled on a pair of soft shoes and crept up on deck. The sounds of level breathing gave me assurance that nine orthodox Mussulmans were fast asleep. After I had unloosened the painter of the felucca and had wrapped the rowlocks round with rags I heard regular breathing going on as before. As I slipped away in the boat the dahabiyeh disappeared in the darkness, while the voices of the birds gradually became more distinct.

There is no mistaking my course. The voices of the cranes drown all other sounds as the boat approaches the shore. There must be several hundreds of them there. I

raise my oars as slowly as if I were hunting seals, so fearful am I of being heard. If only the birds do not rise in a body when the boat pushes into the middle of them. The plaintive call of the ruddy sheldrake resounds as loudly through the night as a hunter's horn. Egyptian geese cackle hoarsely. Water-fowl, whose names are unknown to me, rise up and some so near that I can feel the draught made by their pinions. The rushing of wings and the splashing denote the spots where they have alighted. Beyond come voices from the throats of foreign birds. The whole place seethes like a cauldron, overflowed with life, beggaring description. And throughout it all I rest upon my oars. Hark! What sound was that? What can that huge shade have been which hid the stars?

A dark mass looms up upon the surface of the water. The commotion of voices and movement tells me it is nothing but birds. I imagine I see one of the soft mud-shoals over yonder and hope to approach it. But the whole island rises up and rushes by with such terrific force over my head that, instinctively, I cover my face with my hands. The great heavy geese came so near to me then that I could have touched them with my outstretched hand!

During the last few minutes I have run into shallow water. The oars keep touching the bottom and the keel seems to be held fast by the sticky mud. My ears tell me that most of the water-fowl have been left in my wake. A minute or two later I hear cranes on both sides of me. The boat must have drifted into a shallow backwater of the river. So far as I am able to make out by the stars it seems unlikely to lead in any other than a southerly direction.

The voices of the cranes ring louder and louder in my ears. The nearest ones are not a hundred steps away. In vain I endeavor to make them out in the dark. They are certainly not our native gray cranes. What can they be? I can distinctly hear how they shake themselves and clap their wings.

A shallow place bars my further progress so I endeavor to row closer to a spot where I expect to find firm ground. I throw my weight against the gunwale to keep the keel off the bottom. Now I am getting along better. When no further headway can be made by means of this sliding method—poling is impossible in the bottomless mud—the cranes are less than a stone's throw from me. Some of them observe me. Their voices become agitated, but no

Our Proud Cranes.

A Burnt-off Shore.

The Phalanxes.

sooner does the boat come to a standstill than they regain their calm and at the same time the small birds cease to utter their alarm notes. There is nothing else to be done now but squat down in the bow and wait for daybreak. I dare not light my pipe. The striking of a match would frighten them. It is on nights such as this that one gets malaria. All living existence here appears to consist of bird-life; familiar birds and strange birds that have assembled at this place from three continents.

Truly, never before in my life have I experienced such a din of bird voices in my ears as there was during that night. The majority of swamp birds and water-fowl stay awake the whole night. At all events, this is so in the tropics where the nights are so long, and where the heat compels them to take some rest during the day. They gather together on those parts of the banks where they feel safe from nocturnal enemies. Many of them feed even in the dark and those who are at rest are always awakened by the movements of the others, or by the sound of one shrill note.

What little wading-bird can that be who, in a wistful tone, keeps calling out there quite close to the bank? Per-

haps a small plover from the Mongolian tableland? An eager voice close by is familiar to me—perhaps a lesser ringed plover. It is evident he is keeping vigil. Another voice from the dark out there. What bird can that have been? Yes, I know what it was—an avocet—the bird that, in Sweden, has been exterminated by human beings, but which is still found occasionally on the coast of Germany. And the other birds over there—their shapes begin to stand out against the water, for daybreak is at hand—I remember them now; they are the graceful stilts that I came across on that sunny spring day in the swamps of southern Spain. But that clear call behind me! Surely it's not a godoit—no, I heard one of them just now. It must be something else. Give up! And so it goes on—the uncertainty! But dawn will soon come and then I shall find out.

And now, all of a sudden, the red glow of dawn appears in the east. There are more bird voices than before, and they grow livelier. A movement passes through the multitudes. The great hour of the day approaches. The tumult of the cranes swells until it becomes positively deafening. With my coat thrown over my head I crouch beneath the gunwale so as to conceal myself as much as pos-

sible. It is so amusing to watch the cranes while the light suddenly broadens out. How fortunate that my boat is in the midst of them. The lot beyond is a troop of demoiselle cranes. It was their voices I had been so stupid about. It is a hoarser call in higher pitch than that of our own cranes though not nearly so harsh as the strident blast of the crowned cranes. Their eyes glisten behind their white ornamental head plumes. They look at the boat and look from one to another. If one of them stands his ground the others will stay too. In their trans-Caucasian steppes there are of course no dangerous boats such as this one. Ranged up behind them stands the huge host of large European cranes. In my imagination I had pictured hundreds. There are certainly over two thousand. They stand there like a field-gray army in the morning before it marches off. The greater part are assembled on the mud-bank near the shore. It is only a short way from solid ground. Smaller troops stand on watch in the shallow water that laps the mud-bank, one as an advance guard, and the other posted at the army's head. And where the water is sufficiently shallow thousands and tens-of-thousands of all conceivable kinds of wading-birds stand among them or run about between their

long legs and right underneath their crowded bodies, reminding one of human beings under the porticos of the high-pillared temples of the Nile valley. Small ducks with their reflected images bob and sway on the surface of the water, while some ten or twenty harriers share between themselves the bank above the shore. It looks for all the world as if the little birds were seeking protection by getting into the shadow of the large ones' wings. Long slender necks are stretched out and withdrawn again. The morning breeze plays among the haughty waving plumes and the loud calls reverberate across the broad stretches of awakened Africa.

It is an all too brief, yet memorable, spectacle. For the moment has arrived for the great dispersal. It will never do for the sun to find them there. Beyond the river the red glow of dawn rises up into the sky like a conflagration. The number of voices is multiplied; the uproar swells in volume minute by minute. The small birds' cries are drowned altogether. The crowned cranes standing in file farthest away on the mud-bank begin moving about impatiently here and there and join in the concert with a shrill double-toned burst of horn music. It seemed

"The Sun Sparkled on Their . . . Plumage."

Their Wings Lashed the Breeze.

The Well-known Wedge Formation of Flight.

Demoiselle Cranes.

all the others had been waiting for this. As if at a signal the whole army pauses to listen intently. The multitudes become possessed with restlessness. Urging and questionings are to be heard in their voices. The files arrange themselves in a manner unknown to me. And with a mighty roar resembling thunder or a cataract, swelling in tremendous crescendo, phalanx after phalanx rises and wings its way against the morning breeze.

Since that time I have often come across them clamoring on stormy nights on the Nile when the river was tossed about like a sea; on the desert edge near Gjebel Auli; in leisurely flight on still evenings when they were returning from the fertile fields in Durrah-land near El Dueim; during hot midday hours when they had paused to rest and were quenching their thirst in the company of marabou storks; near Abou Zeid where the hippopotamus wallows; and lastly, when at an almost invisible height they were passing in extended line formation over the valleys of Palestine on their way home to the north. I think of them in the swamps on the Sjaunja moss between the Kaitum and Lule rivers, and of the lovely pair with its tawny young ones on a misty summer morning in the desolate swamp in

the depths of the Swedish forest. But the deepest impressions of all are those that were made upon me by the sound of the unforgettable cries that rang in my ears and reverberated through the quiet evening air of the foreign continent, and by the waving plumes and the rushing wings when the red glow of morning broke upon the mighty African river.

CHAPTER XII

During the succeeding days, I saw more cranes every hour than I had seen during the whole of my journey through Egypt.

The White Nile! So this was the paradise of the winged legions who escape from the autumnal storms in the steppes of Asia and from winter's ice on the coasts of Europe. Here they flock. The surrounding country with its endless deserts and parched vegetation holds no interests for them. They pay little heed to the thirsty beasts and men who must live near the river from which they derive their sustenance—this wonderful stream that steadfastly pursues its way to the north from the lakes of Central Africa, from the rain-soaked tropical forests, and from the snow-fields in the highlands of Abyssinia. Picture to yourself an almost boundless plain—a combination of desert and scrub-covered country as far as the eye can reach—a solitary gnarled tree as a landmark and, dotted about in the

far distance, spectral domes of red earth that shimmer in the dazzling sunlight. The whole wide expanse of this plain becomes overrun with a pale-colored flowing sea leaving long broad stretches of it flooded for months on end and depositing between the golden streaks of desert its lead-colored mud that resembles the naked skin of a monster. All over this mud-desert with its girdle of green and in the shallows of the river where waves curl over and foam, swarms of birds of every shape and kind are to be seen running, wading, swimming and flying. Every new prospect brought into view by bends in the river reveals a constant succession of fresh ones. And so it goes on day after day and night after night while we sail upstream before the steady north wind. The landscape alters slowly; the channel of the river becomes deeper; the desert changes to scrub-country and scorched grassland; the banks become covered with tall grass; and the trees gradually form into open woods, and then dense tropical forests.

Countless cranes, flamingoes, pelicans, black-and-white sacred ibises, wood ibises, little egrets, great egrets, herons of all descriptions—goliath herons, purple herons, grey herons, buff-backed herons, squacco herons, night herons,

African blue herons, and storks—marabou storks, our own small storks, Abdim storks, coal-black African storks, and exquisite saddle-bill storks. To give the names of them all would require a list as long as the index of a scientific work.

My camera, worn with use as it is, has probably never before been called upon to deal with a tithe of the birds there are here. When the swarms take wing and rise up they literally darken the sun. The photographs on these pages must support me in describing what it looked like. My eyes at last grew so tired that I had to give up using strong field glasses. And so it went on the whole time we were sailing. Later on, when I tried to use high-power field glasses on the vibrating shooting-steamer the strain on my eyes was even greater. For the rest the dahabiyeh was as good as a gift from heaven. I had no doubt from the very first that we would be able to sail with the motion picture camera right among the cranes. That may sound fanciful—for the birds were on the shore—but a glance at the motion picture film that I exposed on this journey, showing cranes by the thousands, gives a more life-like impression of the scenes than the static photographs do. The

first attempts came to grief for the simple reason that we came to grief ourselves. But of that more later in its proper place.

The cranes showed a preference for those spots where they could mix with the tens-of-thousands of small birds who teemed upon the flat banks. These favored spots were the wide-spread mud-banks and occasional flat tongues of land projecting into the river. But the places preferred above all others were the narrow shoals that ran parallel to the banks and were separated from the land by broad strips of open water. These shoals afforded good protection from the visits of nocturnal beasts of prey, especially from leopards who, as shown by their tracks on the shore higher up the river, were not above snatching a bird from the flocks now and then during their night prowlings. In the late afternoons one saw frequent, though small, clusters of cranes standing about between the swarming masses of ruffs, sandpipers and ducks. But a more favorable time was at break of day, when thousands of demoiselle cranes and our gray cranes were congregated at such spots. Soon after that hour they all took flight in long lines and disappeared with noisy clamor to browse on the now dried-up

fields, where the inhabitants cultivate their dhurra in the rainy season. But they came back again in small groups toward ten or eleven o'clock, by which time the heat, perhaps, became unbearable to them. In calm weather they returned to their favorite mud-banks or places on the shore, flying high aloft. Against strong head winds they flew low. The first thing they did was quench their thirst. After that, as long as the sun was at its zenith, they stood about and preened their feathers, slept, squabbled a little and, in general, behaved much as human beings or animals would, in other words, did nothing.

Whenever these thousands of cranes flew away and returned again it was seldom that I saw them flying in the form of an angle or a ploughshare, the form cranes so often fly in. They came in loosely flying companies, generally in oblique lines—Epaminondas may have taken note of this before he conceived the idea of his battle phalanx—or in long rows, at which times the flanks of the lines were slightly thrown back. They never returned in the symmetrical wedge formation that cranes so often assume when they are flying long distances at great heights. Physical laws go to show that the well-known wedge for-

mation of flying has the effect, in some measure, of overcoming the resistance of the air. But this applies equally to the arched and oblique line formations of flight. It is certain that cranes do not adopt the ploughshare formation for everyday use. This may possibly be accounted for, on the assumption that it is used only during long journeys, by the fact that these strong fliers are forced to adopt the mode of flight that is most advantageous to them.

So there the birds stood in their resting places until three or four o'clock, when the heat moderated. About this hour the whole community sometimes flew off in troops of twenty or thirty at a time, to browse on the fields. Now and then several of them remained behind. In either event the whole lot were always assembled again on the White Nile before sunset.

The demoiselle cranes and our gray cranes stood crowded together in perfect harmony, the crowds being split up into small contiguous groups of either kind: first a row of a hundred or more demoiselle cranes, then a row of our cranes—perhaps half as many—and then again some hundreds of demoiselle cranes with groups of the larger cranes interposed between them. The crowned cranes were

inclined to assemble in the same localities, but held themselves distinctly aloof from the strangers.

We came upon such crane resorts at intervals of three to six miles or more along the White Nile from the desert region south of Omdurman and throughout the Kordofan scrub country as far as Abu Seid, where the river becomes constricted between rocks and the woods reach down to the banks. But here the numbers of our gray cranes began to fall off. Their favorite winter quarters appear to lie between the uncultivated plain at about 13° North latitude and the region where wooded islands first begin to split up the river. Beyond this territory the demoiselle cranes were always more predominant and eventually the flocks consisted of them alone, together with larger contingents of crowned cranes.

From the first day of my journey up the river, the question of the southern boundary of the winter quarters of our northern birds was always before me, especially that of our cranes. Where should I find this boundary? The wonderful northerly breeze which renders life in these countries bearable even in the hottest season drove our dahabiyeh forward until the water splashed high up on her bow. We

saw cranes everywhere. I asked my oracle, Mohammed, where most of these birds were to be seen. Would there be more or fewer of them higher up the river? Were they only to be found on the flat banks or in grassy places as well? How far southward had he seen them? And Mohammed, who was not accustomed to keep his eyes open for anything less than lions or buffaloes, and who regarded it beneath his dignity to concern himself about such trifles, gave his habitual reply:

"Oh, sir, it's 'lotter' birds in the front!"

I was quite prepared to believe him, but for me every single hour was precious, especially so in respect to our native cranes. With the wind behind us all went well. But on the way back no amount of prayers to Allah could prevail against the *Amira's* antipathy to cruising upwind.

"But are you sure, Mohammed?" I asked again and again, "that there are really cranes *in the front!*"

Mohammed spread out his arms, which doubtless meant there were more than enough. "Many thousands, sir. Many *millions!*"

This last pregnant word came from his lips with explosive force. His statement, however, seemed to have a

flavor of Chicago about it. I went up to him and showed the dusky skipper a ten piastre piece, pointing, meanwhile, at the next troop of cranes who were standing together like a great crowd of men in the distance at a spot where the river made a bend.

Mohammed, who interpreted my meaning, shook his head.

"Too shallow, sir!"

But he let the gold piece disappear into his toga. The crew were then directed to clear the foredeck in order that the camera might be erected on a suitable spot on the lee side.

It all depended now on pure luck! For the skipper had always been accustomed to steer along channels that were familiar to him. The shallows and sand-banks in the endlessly long river were wholly unknown to him. Apart from this the Nile has a disagreeable way of shifting its bed from year to year with the result that new channels have to be found. Further, the water is so muddy that it hides everything beneath it. But the skipper promptly steered in the direction that I gave him with my hand and as we approached nearer to our goal he steered so directly for the

cranes that it looked as if he were intent upon sailing straight into the desert. Indeed, he almost succeeded in doing so. Just as I was beginning to get the cranes into position in my view-finder, there was a shock which all but sent the motion picture camera overboard. The sail hit up against the mast. The cranes, however, now within less than a hundred yards of us, showed no disposition to fly away. They had often enough seen a dahabiyeh run aground. The old and experienced ones who were accustomed to give the warning signal knew there was nothing to be feared from boats with white sails and black men, though sudden death might sometimes proceed from boats with white men and black smoke. It was not until the black men began poling in the mud and shouting at each other and eventually jumping into the water to tug at the boat that it became too much for them and the whole assemblage made off with much commotion.

We managed to float the craft again in less than half an hour. The punting poles proving ineffectual, the crew all sprang overboard and put their shoulders to the stem; all except Mohammed who considered it beneath his dignity to do so, and Emin, the cook, who on such occasions invari-

ably appeared from his galley and looked on like a fat female with arms akimbo. There was a gurgling in the mud as we shoved off. The bow rose up and we were on our way again.

Not being quite clear as to how I stood with the Sudanese Government in making these experiments, I decided to have a look at my contract. An incident of this kind had evidently not been contemplated by them. So when the next troop of cranes on a mud-bank hove in sight I went quietly on deck and showed the colored admiral another sequin.

I have kept no note of how many times we ran aground this day. Where the cranes stood it was shallow and shelving and where it was not shallow and shelving there were no cranes. It was a blessing that the wind was not strong and that the mud was free of stones. At one place there were at least a thousand demoiselle cranes standing in the water on the sand-bank. The water appeared to be deep enough to enable us to sail grandly by them at a distance of fifty or sixty yards. We approached nearer and nearer. The river at this point stretched away in a short reach to the southeast so that the wind took us on the port side.

The helm of the dahabiyeh was gently put over in order that we might sweep past the assembled multitude. What a picture! The camera began to hum. And just at that moment when I had the cranes focused to perfection and the ones next to them were rising up and flying a short stretch towards us against the wind, the bow hit the ground and I was thrown down head foremost with all my paraphernalia about me. The object glass crashed with a bang on the deck while the splendid birds, uttering loud cries, swept rapidly past us on their rushing wings. It seemed as though we were bewitched.

It may be that some one will question why on earth we did not go ashore with the camera and stalk them. I tried to do that several times the first day. Doubtless it would all have gone off famously if only the cranes had not been possessed with an odd propensity to plant themselves on a mud shoal or a mile-long completely flat stretch of river bank. One could get over the ground all right where it was parched by the sun and was full of cracks like clay but then all of a sudden it gave way and one's legs sank into the precious fertilizing slime which covered nine-tenths of the shore. If only there had been some grass or a bush

within range of the birds behind which one might have crouched; or at least a rise in the ground with firmer bottom.

In a wide bay where cranes were accustomed to assemble the natives had worn an approach to the water. They all fetch their water from the White Nile where the cranes and other birds and animals bathe. Leading to this watering place a shallow channel had been formed through the slime to permit access to the water. I covered myself with a piece of mud-gray cloth and crouched down there one morning when the cranes were away and waited till they returned from the fields to drink. But they were not to be outwitted so easily. The first ones that came were astonished to see the unusual object and alighted some couple of hundred yards away. Those that followed naturally settled down at the same place.

It then occurred to me that the cranes usually remain at ease when the herds of cattle come down to the water's edge to drink. Mohammed, therefore, was told to enlist the services of some negro youths to drive a herd of cattle slowly past the cranes. But the oxen headed straight for the cranes each time and the cunning birds at once de-

tected a suspicious figure among the animals and immediately flew a greater distance away. So photographing them in this manner proved unsuccessful. The only chance remaining, therefore, was to try again from the boat.

It was the fourth day and so far I had not succeeded in photographing to my satisfaction a single flock of cranes. The rigging of the dahabiyeh was all a-rattle. The landscape passed by like a panorama. It was perfect sailing weather. About ten o'clock Mohammed came to me and professed that, as skipper, he was feeling anxiety. It was blowing a bit too much. He wanted to heave to and anchor under the lee of the land. At that very moment great herds of cranes came soaring along in their approach to the river. Flocks of geese were feeding on the islands where the grass grew ever greener. Heave to? Surely there was nothing wrong with the weather; it was merely a good level breeze. Slowly and with much doubt, I went aft and offered the skipper some tobacco. It was as I had expected—he wanted to see whether another ten piastre piece would be forthcoming.

This day I got them—praise be to Allah! He had ordained that the water in front of the assembled cranes

should be somewhat deeper and, being the wiser for our many maritime mishaps, we came sailing along under the influence of the fresh breeze. Not one of them succeeded in rising up before the dahabiyeh shot past them at a distance of thirty yards. Then they rose with a roar, file by file, into the air. We had come up to them on the west bank. The wind was blowing about northeast. They had to fly up against it. The sun sparkled on their pearl-gray silken plumage and on the white shining head-plumes of the demoiselle cranes. Their calls rang through the air. Their wings lashed the breeze with a noise like whips. The camera recorded it all!

Mohammed showed all his white teeth. He had been to a cinema-house when he accompanied his "master" to Europe and he began to grasp that this, after all, might be a kind of sport, though elephants were not the primary objective. He motioned eagerly with his hands towards the south.

"Lotter birds in the front, sir! Many thousands."

And so on we sailed after more wild-geese and cranes. They flew accommodatingly before the camera wherever the water was deep enough. And we usually were lucky ex-

cept at one particular spot, where the *Amira* remained fast for a whole afternoon. The breeze was rather stiff and there was no mistaking that she meant it in earnest when she went aground. Everyone set to with punting poles except Emin, the cook. Even Mohammed this time lent a hand. The black and the brown fellows sprang into the water and shoved with their shoulders against the stem. We worked for hours. We lowered the sail, threw out a kedge anchor and hauled on it with all our might. It was hard work. But still we remained fast. Had not Allah on this very day sent one of the cattle steamers up the river, we might have been stuck there indefinitely. A dahabiyeh ashore was an every-day occurrence on the Nile. They threw us a line aboard and we made it fast. The paddles went round and the venerable old hull creaked ominously. We got off all right but the affair had filled me with misgivings. Next time we might be stuck for a week before a steamer happened to come by. And what if it were to occur in one of the branches of the river down which no steamers ever plied?

A few more days went by. New possibilities and new problems arose. I had exposed many feet of film of flocks

of cranes in flight. Then Mohammed approached me with a pensive air and put a question to me. The dusky admiral asked whether it would not be as well to sail after more cranes.

CHAPTER XIII

Sometime ago, when I was taking leave of an old gamekeeper who had been helping me to obtain photographs of a number of birds, I begged him not to tell anybody how we had gone to work for fear that some prowling gunner or other should get to know too much, with consequent harm to the birds. Some time afterwards, the loyal old fellow was asked how I had done it.

"Well," he replied, "it is a thing that requires no great skill. He merely creeps into the swamp until nothing but his head is above water and then when the birds come along he sets up his camera."

This story recurred to me one day on the Nile when we were passing herd after herd of cranes assembled on inaccessible flat mud-banks surrounded by deep slime. I could not help wishing for my own sake either that the old gamekeeper's version of my skill or the Nile mud was based up-

The Colored Admiral in the Sweat of His Brow.

Stranded Heaps of Sudd on the Nile's Bank.

A Pair of Cranes in Flight.

on a somewhat firmer foundation. For out there where the cranes stood no sooner would one dig a hole with a spade than it would fill up again. At one time I seriously contemplated burying the dahabiyeh's bathtub in the mud. But apart from the fact that this would entail giving up my chief daily enjoyment I harbored a doubt as to what the "Sudan Government for Railways and Steamers" might say about it. By a stroke of good luck, however, I was helped out of my difficulties by the sudd.

Sudd is one of the peculiarities of the White Nile. For all I know, other tropical rivers may contain just as much of it, but one usually associates sudd with the White Nile. It consists of lumps of turf, roots, and masses of marsh and water-plants which break loose from the river bed during the yearly overflow, and are carried downstream. One section of the river, known as the sudd-region, becomes so jammed together that the whole river is blocked, with the result that steamers carrying tourist and hunting parties actually have to cut their way through it. Other portions pass down the river in the form of floating islands, large and small. One portion with a strange-looking tropical bush on it happened to be stranded on the northern end of

a mud-bank lying in mid-stream where a couple of thousand cranes stood ensconced in aristocratic unapproachability.

Here the barren flat country came to an end and wooded islands met our view. Tropical pigeons swarmed down from the trees to drink. Birds were everywhere. A pair of white-headed eagles answered each other with piercing screams from one bank to the other. But my attention was fixed upon other things for with my field-glasses directed to the river-bank I was deeply engaged in a problem. Not only were there cranes on the bank, our gray cranes and about twice as many demoiselle cranes; but also some white birds who stood out conspicuously against the others. The dahabiyeh quickly approached them and, to my surprise, they turned out to be our house-storks. For all one could tell, some of them may have been storks from Holstein on their return journey from Africa. Allah was indeed gracious. To send three men aloft to take in the sail was the work of a moment.

The birds were congregated on a shoal about half a mile in length where the water was scarcely ankle deep. Towards the south the shoal rose above the water and took

the form of a low narrow islet. Here the ground was fairly firm and some trees were standing on the southernmost part. On the north side of the islet where the mud-bed was just covered with water was the mass of sudd which had been carried there during the flood season and become jammed.

The dahabiyeh was piloted to a spot behind the trees where the cranes could not see her, and, with my highest-powered field-glasses slung over my shoulder, I cautiously made my way across the island. I was intent upon taking note of the habits of the assembled birds. It was evident that the shallow where the cranes were standing consisted of a small tongue of land for the birds were drawn up in a straight line like soldiers on parade. Wading in the deep water alongside them were snow-white spoonbills thrusting their flat bills into the mud in search of minute aquatic creatures. Individual coal-black open-bills stalked around circumspectly and a single goliath-heron, as large as any crane, stretched his neck forward in my direction. He was shyer than the others. The nearest cranes were not fifty yards from the sudd heap and close to it the ground was alive with ruffs and waders. I knew only too well that if

their suspicions were aroused, they would all take themselves off two hundred yards farther up the mud-bank. By this time it was mid-day and standing as they did in such close proximity to my natural hiding-place it would have been silly to frighten them away by trying to set up my camera apparatus.

But on the following morning, as soon as the cranes had flown off with ear-splitting din to their dhurra-fields, we arrived at the spot armed with all the necessary equipment to make the most of the gift which Allah had seen fit to bestow upon me. I asked Mohammed whether he, too, was not of the opinion that his namesake, the Prophet, had been instrumental in bringing the heap of sudd to this spot as a reward to me for having refrained from slaying any birds. Mohammed, who was delighted to observe a Christian dog taking an interest in the one and only doctrine of salvation, earnestly signified his approval of my belief and ventured to think that it was Allah, also, who had ordained the timely arrival of *El vabur*, the steamer that helped us out of our difficulty on the mud.

It was just after sunrise when we reached the place and not a crane was to be seen. The white spoonbills who had

stayed behind did not even take the trouble to rise from the ground, but merely ran in file some hundreds of yards farther northward. The sandpipers and waders who flew up at our feet wheeled round over the water and returned again. But the Goliath-heron, who pursued his lonely employment of fishing on the edge of the bank, stretched his neck out farther and farther, and finally flew so slowly and so heavily to the opposite shore that it looked at any moment as if he might never succeed in reaching it. Not anyone sailing by on the Nile would have dreamt that this was a gathering place of the cranes. In all probability we had every morning sailed past one crane resort after another without being aware that a few hours later thousands of the birds we were in quest of would be gathered in those places. Even in the night, with one exception when we were anxious to make use of the wind and putting our faith in Allah had sailed on, we heard more than once a babel of birds' voices indicating places of assemblage on the shore that we knew nothing of. It was borne in upon me more and more that not only tens-of-thousands but hundreds-of-thousands of large birds spend the winter in this stretch of country.

To cut the tropical bush apart and rig up a screen that would not excite the attention of the small swamp birds, was quite a simple affair. How the cranes would regard it was another question. The vegetable growth, of which the sudd heap was composed, proved to be covered with minute stinging hairs. When the hiding-place was ready I spent the whole afternoon in arranging my various bits of apparatus and, during the intervals, I had a most difficult time endeavoring by means of pincers to pull these nettle hairs out of my hands.

The next day, after the birds had taken their usual flight over the belt of wood to the fields, the lenses of my cameras were peeping forth from the nettle-like thicket of my hiding-place. I had sent Mohammed and the negroes back with injunctions to dispatch two men in the small dinghy to the northern end of the mud-bank, about a mile away, to prevent the birds from wandering in that direction.

They had scarcely disappeared when hundreds of small swamp-birds began to swarm around me. Remarkable harriers in exquisite blue and gray plumage flew down on to the mud-bank some yards in front of me, alighting like

swamp birds in water. I had no means of ascertaining to what Asiatic species these motley birds of prey belonged. Then the cranes appeared. But luck was not with me. It seemed that the birds were not sufficiently timid of the negroes. The same thing frequently came to my notice afterwards and I had to change my tactics.

What had happened was this. On our arrival the goliath-herons, the spoonbills and some of the other permanent residents had taken themselves off some hundreds of yards away—and there they stayed. When the cranes came back they observed their familiar associates, and joined them. Each succeeding flock did likewise. And though there were great numbers of them—almost three thousand, I should say—they never came within more than a couple of hundred yards of me. In other words, they never came within "shooting range" of my camera. But close to the place where the negroes were in the boat the shoal was alive with cranes. Was it possible that the birds had become aware of some change? Not a bit of it! It was due to nothing more than one of those errors in calculation that renders stalking with a camera so much more exciting; the sort of mistake, in fact, which contributes, more than

anything else, to make this contest between the wits of men and animals the most enjoyable of all sports.

So, as far as the camera was concerned, another day had been lost. Mohammed and I had a pair of loud whistles for the purpose of communicating with each other. The sound made by these whistles, which carried for a mile or more on a favorable wind, resembled the long drawn-out cry of a crane; a sound, therefore, that was unlikely to alarm the birds. We had come to an arrangement under which Mohammed was to creep round to leeward at agreed intervals in case I should want to communicate with him. There were two hours to go until the next interval came around, so I made use of the time by counting the birds with the aid of my strongest field-glasses. It could only be an approximate count of course. About mid-day, when they had all returned to the river, there were standing on the mud-bank in front of me about two thousand demoiselle cranes, five or six hundred of our cranes, only two crowned cranes, about twenty spoonbills, thirty or more open-bills and, so far as I could make out, eleven white storks, one goliath-heron, and a dozen common gray herons. The herons kept to the outer edge of

the mud-bank where they fished and were apparently resolved not to come nearer to me. The spoonbills and openbills sought their food in somewhat shallower water. The cranes had collected in a crowd mid-way down the shoal and among them, facing in my direction, were the storks. On the near side of them, moving about between the feet of the great birds, the ground teemed with ruffs in their winter plumage though here and there among them a cock bird was to be seen, whose light or dark nuptial plumage was already beginning to develop. Mingling with the ruffs on the ground that skirted the cranes various birds, singly or in small companies, kept alighting: redshanks, large greenshanks, the southern and eastern European marsh sandpiper, godwits, stilts, and, to my astonishment, individual specimens of Caspian terns. On the slime around my hiding-place where there was no water, white-headed plover and little stilts ran about. Swimming far away out on the waves were some flocks of ducks whose species I was unable to identify. Tropical pigeons swarmed without cessation over the wooded shore.

From what I had seen it was clear that the multitudes that inhabit the White Nile at this season of the year may

be divided into three distinct types: cranes, ruffs, and stilts.

A few days later when our house storks were passing high overhead on their way from the south their flocks could be counted by thousands. Only a few remained with the cranes who were wintering here. The herons were in the habit of going about singly, each one looking out for himself, though a few sometimes gathered together to form a small troop. A like behavior was common to all the smaller kinds of swamp-birds, with the exception of the ruffs, whose numbers ran to tens of thousands. Indeed, over a wider area there must have been hundreds of thousands of them. Where these immense swarms of ruffs derive from, it is of course impossible to say, but the probability is that they come from the Russian and west Asiatic lowlands. They diligently sought for minute creatures in the shallow shoals and on the shore, but their most richly provided table was on the dry land, where they fed on dhurra and whatever other kinds of seeds they could find there. Like the cranes they flew backward and forward between the river and the fields. At Kosti station, in Kordofan, I observed numbers of ruffs running about looking for corn on the dry sand between the rails as well as on the

sandy road in the Arab quarter. It was a peculiarly striking sight. At home, during the breeding season, they are very rarely seen in other than flooded areas, though sometimes one may come across them in the fields in Öland engaged in feeding upon insects. There, too, contrary to what one might expect, they pick up corn.

I saw no other kinds of small swamp-birds seeking for food on the parched African fields. All the sandpipers and plover kept close to the river, preferably confining themselves to the banks. But the few house-storks who were resting here, took themselves off, without doubt, twice daily to the dry land. What kind of food they found there I was unable to discover. Grasshoppers, which are a favorite food of theirs, were not to be seen, and it is scarcely likely that they ate vegetable food. I spent hours on the following day wandering about over this barren stretch of scrub country with its parched belts of wood and undergrowth; a tract of country which, however green and stocked with animal life it may be in the rainy season, was now glowing with heat. Two snakes and some nimble lizards were the sole reptiles that I saw. The only kind of creature in anything like large quantities which might have served as food for

the storks, were crickets, who struck up their queer concert as soon as the sun went down. During the day they hid themselves in the deep cracks which interlace the dried-up clay bed of the Nile, giving it the appearance of a fine net. Such questions are scarcely open to solution without resort to the killing and examination of a number of birds. But to have fired a shot in this paradise of animals would have been the greatest of calamities. I had no notion how near we were to a misfortune of this kind. But that belongs to the narrative of the next day's events.

The two hours gradually passed. I forbear to relate what I suffered in my hiding-place while the sun was overhead. When Mohammed appeared at the appointed spot, I summoned the negroes with a shrill blast on my whistle and made all haste to the dahabiyeh to dilute the congealed sap in my veins by means of one of the two hundred and forty bottles of water.

CHAPTER XIV

After some lunch and a little rest I decided it was time to rehearse our strategy for the morrow. Securing two fishing nets, I went ashore with Mohammed and the four smartest members of his crew to a spot where the mud was dry enough to bear us, and there I moved the men about like so many living chess figures in order to demonstrate my plan to them.

"Here, Mohammed,"—and I drew a map in the soft mud with a stick—"is the place where the cranes are standing on the mud-bank, and that is the direction from which they come flying. Here is the heap of sudd and the wind blows from over there. Now, you must place one man on the east side of the shoal. If the cranes should make in his direction he is to move cautiously towards them. Otherwise he is to remain still. The boat is to be lying at the north end of the shoal when the first cranes appear. If the next flock should happen to alight to

northward of the first lot the boat is to be moved very gently towards them; the idea being that each flock as it arrives should settle to the southward of the preceding flock. But as soon as the first lot has arrived, you and one other man will take the net and, beginning at the north end, will ply it backward and forward in the shallow water, taking care that not one crane moves a single step to northward. You are not to call out to the other men and are not to stand upright or take any notice of the birds. When you approach them it will be as well to keep your back turned towards them and to draw the net after you. And be careful never to approach the cranes directly."

Mohammed at once grasped my meaning. To him it was much the same sort of thing as when he had driven elephants toward an "American lord." But, nevertheless, he had some qualms about it.

"Many crocodiles in the Nile, sir!"

This, of course, was sheer nonsense. Even though I had observed a few crocodiles during the day on the muddy river bank, it was hardly to be expected that one of them would encroach upon the shoal where the water lapped

scarcely ankle-deep. But everyone delights in having something to fall back upon. Mohammed hit upon crocodiles. So I took out a handful of sequins and promised he should have them if he succeeded in urging the cranes to come up close enough to me that I might reach them by throwing a stone; a thing which was impossible of course since there were no stones in this region. During the whole time that I was occupied in angling for fish for my supper and while Emin was boiling them—for the Indian frying-butter had gone rancid—I could hear him haranguing his underlings on the foredeck in an unknown tongue as he pointed out what they had to do in order to drive the birds towards the crazy white man's bush.

This time Mohammed won the coins. No sooner had the boat with the two fishermen landed on the shoal than the herons and the spoonbills took it into their heads that this encroachment on their fishing rights was more than they could bear, and they straightway made towards me. They alighted a couple of hundred yards from my heap of sudd. The first troop of cranes returning from the fields settled down close to them. A few minutes more and upwards of a hundred were collected at the same place.

My fishermen were apparently carrying out my instructions to the letter for not one of the two thousand odd cranes that now rained from the sky alighted on the far side of those that had preceded them. The dark figures of the fishermen soon became hidden from my sight behind the necks of the towering birds.

The whole air rang with their cries and their great wings obscured the sky. The loud cries of those approaching in the distance were answered by the ceaseless clamor of a thousand voices. Flock after flock, first ten, then twenty, and finally thirty at a time, came sailing into view. Numbers of them appeared flying from the land to westward of the river and, passing obliquely in front of me and behind me, joined the others in scattered companies just as they were folding their wings. The hundreds of birds increased to thousands and each new flock that arrived alighted a little bit nearer to my hiding-place.

The breeze had freshened during the day. The great birds were forced down by the opposing wind. Some flocks coming from behind me passed so close over my head that, had I stood up, I could have touched the birds with my hand. Within my hiding-place I could even feel the draught

made by their heavy wing-beats. I had no time to look at my watch. If only sometimes we possessed four hands instead of the fumbling two! My stalking-camera was concealed in the twigs just above my motion picture camera. Its reflex mirror was turned downward so that I could manipulate the camera with my left hand while looking at the mirror from below—like a hunter endeavoring to use two guns simultaneously—with the result that, throughout the whole time that the birds were literally raining down, I was only able to expose two plates in addition to my motion picture film. It requires more skill to shoot a flying eagle than one sitting on the ground. For the same reason it is more difficult, and consequently more interesting, to photograph flying birds than stationary birds. As it was, I had succeeded with my two hands in winding off almost the whole of my motion picture film. A single reel lasts but a minute; there are few things on earth so easily used up.

At last I had the host of cranes standing before me as I had always hoped to have them, the nearest not a stone's throw away. Mohammed had justly earned his piastres. I said "standing" before me. In fact they were strutting

about with slow and measured, yet graceful dance-steps, reminiscent of an old quadrille. At any minute the so-called cranes' dance might begin. The ruffs, whose presence among the great birds had heretofore escaped my notice, were there too. They are the inseparable henchmen of the cranes.

That cranes are addicted to dancing is one of those sayings that people repeat who have perhaps never set eyes on a crane. In the same way that anecdotes about Bismarck and Goethe are passed around about things that never really happened, so fables that will not bear close examination are spread about the peculiarities of animals. In heraldry, for instance, the crane has been regarded for ages past as a symbol for vigilance. The bird is represented standing on one leg with a stone held in its uplifted foot. The idea behind this imaginary picture is perfectly sound. The crane is indubitably the only bird who holds a stone in his foot to prevent him from falling asleep. With the exception, perhaps, of the great bustard, there is no bird belonging to our continent of so wary a nature as the crane. It is a common saying that cranes post sentries to warn the others of danger. This belief is so commonly

held that I have never heard it questioned by anybody; but among the many thousands of cranes that I have had under observation I have never yet succeeded in discovering a sentry. When a flock of these wary birds is resting or feeding there is always one among them on the alert, but he performs the duty of sentinel in a perfectly automatic way and continues doing so until his place is taken by another one a few minutes later. And the notion that cranes "dance" rests upon an equally unreliable foundation. Cranes in captivity evince a great liking for music and when they hear it they are prone to make curious springing movements. But we may take it that this rarely occurs when they are living in freedom. During the breeding season when cranes show themselves off in front of each other and walk around with wings spread out they are doing no more than many other birds do. It is said of demoiselle cranes that they perform "dancing gambols," and the African crowned cranes sometimes indulge in a few playful hoppings which might be described as dancing. But although I watched countless multitudes of gray cranes and demoiselle cranes with my field-glasses at distances great enough to preclude any possibility of interference,

it was rarely that I saw any of them dance. I have seen them occasionally showing themselves off or leaping with graceful attitudes while they walked round about each other with dainty tread. It might, of course, be called dancing by any one who felt inclined to call it so.

I tried to get a photograph of this "dance" on one occasion when a whole host of cranes stood reflected in water unruffled by the wind. It is to be seen in my film: "*With the birds-of-passage to Africa.*" I never saw them in a livelier state, but their liveliness then was chiefly due to the presence of my native assistants who were approaching them from the rear, across the mud. It was astonishing to witness how little fear the cranes had of the naked natives. As soon as they saw a man in clothing they became distrustful, and at sight of me they were ready to fly twice the usual distance. I often considered giving myself the appearance of one of my servants by exchanging my khaki suit for a kind of Nubian blacking of my skin. However, I gave up the idea when I recalled the unfortunate experience of van Zanten when he besmeared himself with red earth in order to make a favorable impression upon the daughter of the Polynesian King.

The Beat of the Great Wings.

The Caspian Tern with the Cranes.

The Cranes, the Negroes and the Nile Steamboat.

The demoiselle cranes in particular showed no uneasiness on account of the black fishermen. Farther up the White Nile near Abu Seid, where no more of our gray cranes were to be seen but where demoiselle cranes in countless numbers covered the banks of the river, I enlisted a rabble of native fishermen to advance towards the birds from the far side of them. I gave instructions that, while they were drawing their long line of nets, they were to drive the birds towards the spot where I was concealed. It will be observed from the photograph in this book, and in the film too, how downright reluctant the demoiselle cranes were to move. Nor were they the least bit upset when a cattle transport steamer, which is seen in the same photograph, passed by on the river.

Is this confidence due to the fact that the cranes belong to districts in Asia and Russia which are devoid of human beings, districts where they are never persecuted? Or is it their habit to behave in this manner when they enter into their tropical paradise? May it not be that their attitude of confidence towards the black men was due to the fact that the natives in this country never do them harm? Let any one make an attempt to approach a herd

of cranes in the South Swedish lowlands, or on the heath at Öland and he will soon find out that the birds take very good care not to allow a human being to get near them.

It so happened, however, had it not been for Mohammed's vigilance, they might have had bloody proof on that very day that the natives are not invariably to be relied upon. I was beginning to wonder why the birds were becoming so restless. The cranes stretched out their necks and appeared to be more uneasy than they were before. Some single flocks farthest away took wing and alighted among the cranes that were nearest to me. Then in the distance I heard Mohammed's voice. He shouted out something I was unable to understand, although I had forbidden him to utter a sound. The first thing that crossed my mind was the crocodiles. Could anything have befallen the men? Full of anxiety, I raised myself up from the camera and tried to find out the cause with my field-glasses which hung suspended under the grass roof. There stood Mohammed behind the forest of cranes much nearer than I expected to see him. It was simply astonishing that they did not all get up and fly away from him. He was scarcely more than two hundred yards away from them. Was it some-

thing he wanted of me? He threw his arms about and yelled for all he was worth. I peered through a slit towards the east shore. Birds were flying toward us from that direction. But why? Suddenly I saw two men who were not of our party. One of them was carrying something. It was actually a gun! They were creeping forward under the shelter of some bushes and were drawing near to a number of birds who were standing close to the bank.

At the same instant I was taken aback by seeing some white storks suddenly alight in front of me among the cranes. I set to work with the camera again feeling convinced that in a moment more it might be too late. I managed to get one of them on the film as he was drinking, but had hardly done so when the cranes farthest away began rising in hundreds in front of Mohammed who came forward roaring like a bull and making signs with his arms. The whole host of cranes presently took flight and all the other birds followed suit. They came straight toward me, passed over my hiding-place and away. Their wings made a roar like that of a cataract and Mohammed's voice was drowned by the cries issuing from thousands of throats.

During these exciting moments I worked with camera

and plate-holders to record as much as possible of the spectacle. It was not until I had used up my last foot of film that I again heard Mohammed's voice outside. I crawled out, blinking, into the hot glare of the sun. Tortured as I was by the stinging-nettles and mortified by the ruin of all my hopes, there remained some consolation in having achieved something during the excitement. And there stood Mohammed, still angry and excited, looking much like a cock after a cock fight. He gesticulated towards the opposite bank and gabbled profusedly.

"Those *damned* people have come to shoot at my cranes! They have upset all my arrangements. Were you satisfied, sir? They flew straight towards you! Such a lot of them too! Haven't I earned my half pound, sir? But those *damned* people, they came down to shoot! But I chased them off! They are miles away by now. I promised them *three years prison.*"

He repeated his last remark, laying particular stress on the "three," as if he were pronouncing a judicial sentence. He was magnificent! It never occurred to him that he had given the cranes a terrific fright.

But there was not much harm done after all. Before

the sun went down they were all back again, though a good distance away on the river bank. On the days following I took more pictures of them than I can ever make use of.

And again we proceeded on our way.

CHAPTER XV

We were approaching a new country and new birds! Striped snake-eagles, white-headed African sea-eagles and Bateleur eagles were to be seen in graceful flight above the jungle. Vultures, each one larger than the last, soared in the sky on the look-out for spoil. Marabous, like giants, strutted about among the motley assemblage of birds on the banks.

My original plans had been merely to go in search of the birds-of-passage in their winter quarters, to devote myself zealously to photographing them, and to obtain an insight into their ways of living. There was hardly time to do more. But it was difficult to resist the temptation of diverting my camera from the cranes and sacrificing a day or two and a handful of plates on the new African birds that kept constantly coming into sight. There were many other creatures apart from the birds. Monkeys were swinging about in the high trees. There were antelopes

who ran a little way back from the bank of the river when the dahabiyeh passed by, and turned round again inquisitively to take another look. Hippos rose snorting out of the water round the vessel, exposing their ungainly heads; and living images of primeval leviathans lay dozing on the islets of slime.

But the chief attraction to me was the birds. The difficulties of approaching them with a camera were not nearly as great as approaching an eagle or a wild-goose at home. Among all the giant birds of tropical Africa my intention had been to photograph not so much the marabou, or the goliath-heron,—but birds such as the secretary bird or the rare shoe-bill, or that shyest bird of them all—the saddle-bill stork. After the ostrich he is the shyest bird in tropical Africa. An ostrich's sight is probably the sharpest of all the creatures on the face of the earth, and for sheer vigilance may justly be compared with the Norwegian reindeer or the Swedish mountain wolf. But all the rest of the African birds that came under my observation during that winter surprised me by their apparent lack of shyness, or, to put it more correctly, perhaps, by the placid confidence they showed in human beings. There

was no difficulty whatever in getting near them—even the largest ones, provided that one's time was not limited. At first I largely overestimated the difficulties. For although all these long-legged storks and large-winged vultures and eagles were prone to show caution when approached in the open, they seemed to be wholly unable to see through any attempt made to approach them in concealment. On the other hand the large sagacious birds, who inhabit our own perpetually shot-over countries, possess this faculty of detection to a high degree. It was not only the birds who surprised me by their lack of this perception, but also the crocodiles.

I was able to sacrifice only one day to the marabous and vultures, and four to the crocodiles. There is nothing remarkable in the fact that I was able to obtain photographs of all these creatures. Indeed the marabous and vultures came so near to the place chosen by me as a "rendezvous," that several times I found it impossible to photograph them. They simply stood a few yards away in front of my grass-covered pit, so near to me in fact, that I was unable to use my reflex-camera, since it was not adapted to such short range.

"Their Wings Made a Roar like a Cataract."

The Marabou.

As for the crocodiles, I had conceived the idea from travel books and from stories related by bold hunters that the notoriously large crocodiles of the White Nile were such extremely shy creatures that they could only be shot by means of long-range rifles at great distances. The friendly monsters that move about in the film I took of them must have belonged to quite another race, for they crawled up so close to my camera that often there was no room for them on the plates. I dare say the hippopotamus would have behaved in like manner if my time had been my own and if other things had not happened which I shall presently relate.

We sailed day by day up the river on the look-out for more cranes. The numbers of birds on the banks grew less and less. It was already near the end of March. They were passing northward. Small flocks of ducks, spoonbills, and gargeny teal hurried along the river to the north and at midday straggling lines of storks were to be seen flying at immense heights overhead. Not a single crane, however, was to be discovered. Those that possibly wintered farther south had probably already passed by, or they may have taken another course. This was not their

realm. The farther south we went and the more forests encroached upon the banks the greater was the variety of animal life that belongs to the interior of Africa.

In order to ascertain whether we had actually reached the border line of the winter quarters of the birds-of-passage, or whether they had all already gone northward, I went ashore and rambled about with field-glasses over the now dried-up swamp country. At one place in the middle of a sun-scorched grass jungle there was still some water remaining, and here tens-of-thousands of African ducks, small water-hens, ibises, pelicans, and spoonbills were holding out. The many tracks near the water hole showed that the antelopes, hyenas and leopards preferred coming here to drink during the night rather than go to the river where crocodiles lurked everywhere.

The woods teemed with bright-colored African birds, for which in our language there are no adequate names. Roseate bee-eaters flitted about over the parched reeds along the Nile in pursuit of insects. But still none of our birds-of-passage were to be seen. In vain I followed every plain-colored little bird in the underbrush. There were no warblers or flycatchers; nothing but red shanks of various kinds

that tripped about on the dried-up edges of the river's backwaters. They wore such a diversity of yellow and gray feather dresses that, at a distance, I had to give up the attempt of distinguishing between the European and Asiatic varieties. At places where water was still left, south-European stilts were running about; a pair of avocets swam in an odd way between the tree-ducks, and house-storks were more and more in evidence. They took flight at a great distance from me, spiralled many hundreds of feet up into the air, and disappeared in a northerly direction. It was a certain sign that time was pressing.

Then one day from aboard the dahabiyeh I noticed a pair of common gray herons who were standing like sentinels among a lot of crocodiles at the point of a small island. Although I had taken several thousands of feet of film of the cranes, and they had been stowed below-deck in hermetically-sealed boxes, I had as yet not been able to get photographs of these, the commonest of all birds-of-passage along the Nile, from Egypt upwards. These cunning birds were prevalent everywhere, but they were aware of the ways of human beings and kept aloof from them while the African egrets who sat in the trees or fished on the Nile

banks allowed me to photograph them without recourse to any roundabout methods.

On the southern part of the shallow mud-bank where the crocodiles lay, was a dense thicket of nettles, and I made up my mind to try and kill two birds with one stone. I wanted to photograph the herons and crocodiles at the same time, if the reptiles would not be too shy. There was one thing, however, which I was not clear about: could they scent human beings? After all, we know so little.

The dahabiyeh was run ashore and I took Mohammed and two of the crew off with me in the dinghy. By means of a steering oar we managed to drift with the wind in a northerly direction towards the point of land where the crocodiles were lying. A pair of huge hippos emerged several times behind the boat. They rose snorting to the surface like monster seals. Doubtless it was nothing more than mere curiosity on their part. It may have been the nutshell appearance of our boat that excited their wonder. Nevertheless, it was impossible to refrain from imagining the result should one of them take it into his head to heave up the keel of the boat, in play, with his snout.

The wind soon drove the boat near the land-spit. It

was curious to note how slight the effect of the river current was. What a fearful sight we saw there on the mud-bank! With my naked eye I could count nine crocodiles, each larger than the next; and there was one whose back only I could see, looking like an upturned boat, who might have been the father of the whole family.

The creatures were not as shy as I had feared they would be. It was not until we were within easy rifle-shot, a distance of barely two-hundred yards, that the herons stretched out their necks and took flight. At this signal of alarm the whole armour-plated squadron plunged with one accord into the river, throwing up cascades of water. Some crocodiles who were lying at a somewhat greater distance away on the island behaved in a very curious manner. Instead of crawling forward, they raised themselves high on all fours and ran with uplifted tails like ordinary nimble lizards, finally jumping with one bound into their own safe element there to disappear. A few minutes later one head after another rose to the surface; but never a snout,—nothing more than the mailed foreheads with the watchful green eyes. They looked like knobbly pieces of bark drifting on the waves.

It was impossible to forsee how things would turn out. But time was pressing. There could be no doubt that the birds-of-passage had already flown northward and the steamer we were relying on to tow us down the river—the only one due for the next two weeks—might appear any day. But for this possibility the right procedure to have followed would have been to study the habits of the creatures for a day or two before making an attempt to get near them with the camera. As matters stood, however, the only thing to be done was to land on the island without the necessary preparations. The mud was so deep on the island that no bottom could be found when we thrust in an oar. We were compelled, therefore, to row round to the opposite side of it and from there work our way through the undergrowth. Purple herons rose everywhere in front of us and exquisitely-colored kingfishers flashed like flying jewels from the land out over the water. Here the mud was literally ploughed up by the crocodiles. The sun was still in the east. It was a case of now or never.

Within a few minutes we had prepared a hiding-place on the edge of the jungle. At this spot there was a hippopotamus path along which the heavy creatures passed

The Bank Where the Crocodiles Lay.

A Friendly Party.

by night on their way to water. All I did was to tie the high grass together over this path and erect a grass screen in front and behind. I then crept inside with my camera and told my negro attendants to go back to the vessel.

I had made up my mind to stay there for eight hours. At the last moment I gave Mohammed instructions to row by a round-about way to the other side of the Nile where the herons had flown and disappeared behind the tall grass, and if he should find any of them there, to try and drive them back again. At the same time I gave him my Browning so that he could fire a signal shot in case the steamer should come in sight, and also to protect his precious skin from the leopards that he was forever talking about. When he left all became quiet. Not a sound was to be heard except the constant snorting of the hippos when they rose to the surface to observe which way the boat had gone.

If it should ever be my lot to return to the White Nile I shall certainly look for this spot again. Before a few hours had passed one might for all the world have been between-decks on Noah's ark, assuming, that is, that crocodiles were among the ark's inmates. The first thing that happened was the emergence on the surface of the water

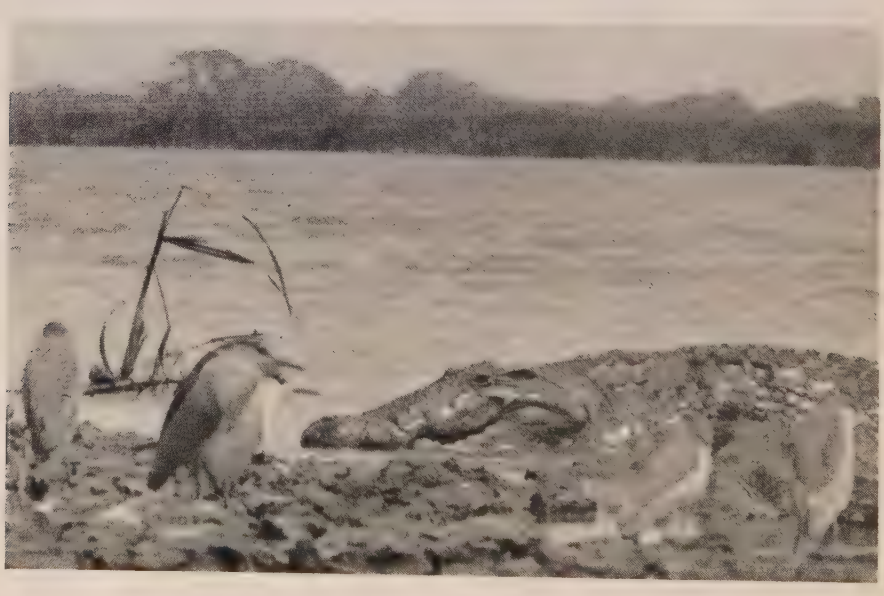
of some of the smaller crocodiles who drifted along the eastern side of the bank like pieces of tree-bark.

From where I was hiding I could overlook the whole land spit. It was not more than a few yards from that side of the island to my hiding-place. Whether the crocodiles had suspicions of my presence I was as yet unable to tell. Presently three of them became visible, then four,—then five. Meanwhile a single one was approaching on the western side. The apparently lifeless pieces of bark drifted slowly nearer rising, meanwhile, almost imperceptibly, above the surface. It was easy to perceive how in this manner they might move up to beasts coming down to drink, or women bent on fetching water, and then suddenly with one bound dart ashore to seize upon their chosen victim. On a subsequent day, when I eventually succeeded in photographing a heron, an enormous crocodile made just such a lunge. It is recorded on my "Birds-of-passage" film.

They lay there as if they were waiting for one of the largest ones to make the first venture ashore. But this was not really so. In the case of all semi-aquatic animals such as seals or crocodiles, the smaller ones are invariably the

The Small Heron and the Crocodile.

"He Emerged Peering from the Water."



"A Veritable Leviathan."

first to land. The large and more experienced ones wait until the last. They are conscious of the risk and have more patience. Presently, a dark object flew past. A black bird with a long yellow neck alighted on the bank. It was an African darter. He beat his wings to dry his feathers after fishing. Shortly afterwards another one came, as well as a shag; and then, all of a sudden—heaven knows where from—two spur-winged lapwings joined the party. It seemed as if the crocodiles had merely been awaiting their arrival. One of them who turned out to be enormously big emerged peering about him from the water, while two others drifted slowly nearer in shallow water. The power expressed in their creeping movements when they crawled up on the mud was enough to give any sensitive man a cold shudder down his spine. Ensconced with my camera behind the grass screen, I regarded every foot they advanced towards me as an especial gift of Allah. The first one that came remained alone for a long time near the screen not more than twenty paces from me; but farther up the spit where the mud was heaved into confusion by the weight of their huge bodies they were crawling, huddled together, like a family of dragons.

Some night-herons came sweeping noiselessly along and settled on the bank. They were accustomed to sleeping in the day-time in the trees. I cannot say what they came here for. Probably Mohammed had disturbed them while he was hunting for leopards. These birds were an every-day sight. But there was no sign of the common herons which I was longing to see. One of the night-herons who stood literally touching the snout of the nearest crocodile seemed to be quite unconscious of any danger. I cautiously snapped him with my camera keeping my eye fixed, meanwhile, upon a particular spot farther away. A head that had emerged there was shaped quite differently to those of the other crocodiles. He was the giant of them all and he was bent on making sure that the ground was sufficiently safe for him. He was a wary general. For fully half an hour he lay motionless as though asleep. A flock of tree-ducks came sweeping past and alighted noisily in the water at the head of the land spit. Their advent appeared to have a reassuring effect upon the giant. At first a narrow streak of his back became visible above the waves, then the jagged points of his mighty tail appeared and finally he glided towards the others as slowly as a steamer

moving into position alongside a quay. As he moved up on to the mud, exposing his whole body above the crawling thick arms—for they were more like arms than legs—I realized that I had before me one of the notorious eighteen-foot crocodiles, such as one rarely hears about. I afterwards measured the distance between a clump of grass where his snout had been and a piece of clay which his tail had touched. But the most striking thing about him was not so much his length as the huge bulk of his body, which put one in mind of an upturned boat. Jonah would have found ample room inside him. Compared with the other ones when he wallowed up among them—any one of which could easily have disposed of a man—he was as big as three or four of them together: a veritable leviathan.

The outward appearance of these mail-clad, but nevertheless agile, monsters is without parallel among the living creatures of today. They stand apart from all other living things. They look so extremely unwieldy and their ordinary movements are heavy and slow. Yet when they are wrangling with each other they display the agility of a fish; and woe to the wretched man or beast upon whom those immensely powerful jaws have once closed.

When the giant shot up the bank the other ones that ranked next to him in size slid unwillingly back into the water. Evidently there was no harmony among them notwithstanding that they might lie side by side.

It was remarkable to observe how different they were in form. The smallest looked exactly alike; but the four largest were as easy to distinguish from the other as if they had been human beings. There can be no doubt that animals recognize "personal" differences among members of their own kind which we are unable to perceive. The possibility of mistaking one man for another among those with whom we have daily contact never enters our minds. It is only when we find ourselves in an assembly of strangers that we are struck by the dissimilarity of faces. But we are blind to the individual differences of a flock of swans on a pond, or a crowd of starlings feeding in a meadow. If we were able to see with their eyes it would be quite another thing. A stork picks out his mate at once in a multitude of others, and so does a sea-gull from the midst of a throng of other gulls flying above a nesting ground. It would be worth while starting an investigation to find out to what extent animals are mutually capable of identify-

ing each other. But the large crocodiles, strangely enough, were distinguishable one from the other even to the human eye. The one that lay nearest to me, as shown with the heron in the illustration, was an average-sized crocodile and the scale of proportion between his powerful head and well-developed body was nothing out of the common. Another large one lying some yards away to the right of him had a disproportionately small pointed head and a distended body, with strikingly small limbs. And the hugest that I mentioned had a head and body which during his later years—I venture to think that creatures of this sort must be fifty, perhaps a hundred, years old—appeared to have developed only in respect to his breadth and height and was as coarse and rough-hewn as the figure of a professional athlete. These creatures not only differed in outward appearance but doubtless, also, in character. A captured crocodile may become tame as a result of feeding. But the larger of these crocodiles gave one a positive and quite convincing impression that they are cowardly and malicious beasts. Difficult as it is for me to extenuate that questionable form of sport which entails the slaughter of the confiding animals who teem in this country, I must admit the

satisfaction there may be in putting a steel-coated bullet accurately behind the furtive green eye of one of these monsters, their sole vulnerable spot.

It is very interesting to observe the different ways in which people are affected when looking at them. Normal-minded persons must feel an instinctive repugnance when confronted with these creatures, a feeling they would describe as "hateful," though for that matter there are many individuals among us who surpass them in repulsiveness.

A hunter and sportsman bursts out with: "Jupiter, aren't they magnificent!"

Cool business-like men mutter gravely: "What singular and interesting creatures!"

Young ladies in their teens merely ejaculate:—"Ugh! how horrid!"

But a simple honest peasant at once hits the nail on the head with his shrewd verdict:—"He's a devil and no mistake about it!"

One cannot fail to admit that these great crawling beasts cut poor figures beside the slender, agile birds.

CHAPTER XVI

Suddenly birds came flying and settled near me in such numbers that I scarcely knew in which direction to turn my camera. Long chains of dark brown tree-ducks swept along the river and alighted on the dried-up mud, where they tripped about on their queer tall legs. With their pale faces and black shoulder veils they looked exactly like so many nuns. Night-herons one after another came flying up with supple rounded wings and stood still as statues almost within touch of the crocodiles' jaws. White spoon-bills with beaks like pastry lifters, and open-bills with their odd-looking beaks which they always held half open, like long half-opened forceps, flew down in front of me. A pair of wood ibises with naked flesh-colored faces took up a position in the middle of the other birds and began cleaning their bills with their feet.

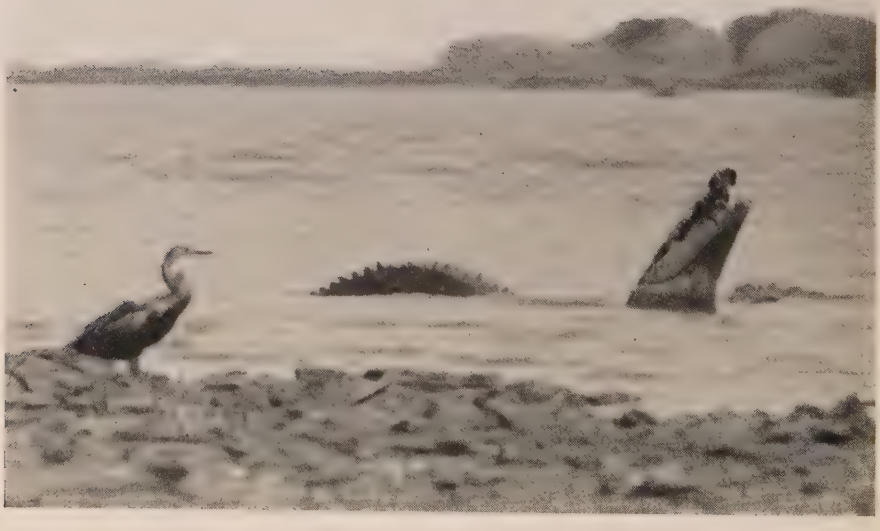
The crocodiles now began to grow lively. There was no doubt but that the presence of the birds fortified their

confidence. Some of the smaller ones ventured to move higher up the bank. The giant slid suddenly into the river. He looked like a boat running off the stocks. For a moment I thought something had gone wrong. But he knew what he was about. His favorite spot happened to be precisely the place where another crocodile lay in front of me. The latter, a moment before, had altered his position in the mud and the nearer the giant approached him the more he kept turning and shifting his body about. The monstrous head glided slowly nearer along the surface of the water. I followed his movements carefully with my camera. How much easier it is to take motion pictures of a wild animal than to get a good still photograph of him! I suddenly realized his design. He wanted to usurp the other's place. He lifted his shapeless head and reared up like a horse. The mighty jagged tail was raised in a series of loops along the surface of the water. He lowered the lids of his glittering eyes until they became mere slits. Then he clapped his jaws together on the surface of the stream splashing the water about again and again. A more convincing spectacle of malicious spitefulness it would be impossible to imagine. The smaller reptile raised himself up

"He Laid His Snout between the Night-herons."

"They Grudged Each Other the Best Place in the Mud."

Spoonbills and Wood Ibises with Tree-ducks.



"He Opened His Jaws after the Manner of a Howling Dog."

too. But the giant made a sudden turn and fell upon him. He was intent upon disabling his antagonist. It was all so very human: the way they begrudged each other the best place in the mud. Then, to my astonishment, the weaker of the two stood upright and opened his jaws after the manner of a howling dog and from his yellow-green throat there issued a yell that might have come from the cavernous depths of hell: a neighing roar, beyond my power to describe. And the leviathan calmly removed himself to another spot on the mud-bank and contentedly laid his snout between the night-herons who were no more perturbed by his sinister presence than if he had been a crawling worm. A pair of smaller crocodiles heaved themselves up on to the bank and nestled down close beside him, as though seeking his protection. It was one of the unsolved dramas typically representative of tropical Africa with its background of the great pallid river stretching like a sea to the northern horizon.

A dazzling white sacred ibis with black naked head came walking along, stopped, and stationed himself like a sentinel. A little farther off on the island spur-winged lapwings moved about warily and busily among the other

birds. They ran here and there around the crocodiles' jaws without fear, looked for minute animalculæ in the mud, and were unceasingly active. Owing to their agile movements I was unable to obtain photographs of them.

At that moment something took place that ruined the remainder of the day. The drama before me had scarcely lasted four hours when, to my alarm, I heard men's voices to the westward on the river. They drew nearer. Then, behind the farthest spur of jungle on the land spit, a huge raft came rolling along; the kind used by the natives on which they drift down the river and then sell the wood composing the raft to the people who inhabit the treeless regions; after which they return to their own village *pedes apostolorum*. The four fellows were holding a loud palaver. The wind had freshened and in front of them lay an open reach where the raft would be exposed to the rising waves. So they slowly and deliberately poled the raft to the shore close to the spit occupied by me and the crocodiles, and my plans were shattered.

I saw that the men were stretched out lazily on the raft timbers. They never, of course, gave a thought to the birds and crocodiles or even looked in their direction. But

A Trading Craft on the White Nile

A Wood Ibis Standing Sentinel.

"They Looked Like Large Toads."

the various storks stretched out their necks, and the nearer the raft came the more restlessly the spur-winged lapwings ran crying about on the bank. Then they took flight, even before the other birds had shown any sign of anxiety. At the same moment the giant crocodile plunged into the river like a torpedo, and disappeared. The other large ones followed suit. All the various storks looked round about them, perceived that a signal of alarm had been given, and flew away. With them the tree-ducks took their departure. The smaller crocodiles, who were lying nearest to me, lifted their heads to see what was going on. They looked like large toads. Then they, too, slid into the water. And the only creatures left out of the whole paradise was a pair of tired herons. Out on the water the floating pieces of bark bobbed up and down, so far away as to be scarcely visible but I knew their telescopic eyes clearly observed everything that was going on ashore.

Naturally I did not venture out of my hiding-place. To have done so, in view of the days to follow, would have been far more disastrous than if the dahabiyeh had sailed up to the spot. Wild creatures are not upset for long by

the menace of approaching danger. As soon as it has passed they recover their calm and return. But if a human being suddenly appears among them from an ambush the shock they receive is a severe one. There was nothing to be done, therefore, but wait.

The flight of the spur-winged lapwings, when the raft appeared, was somewhat of a puzzle to me. They had given an unmistakable signal of alarm. A naturalist traveller once described this bird as the true "crocodile-bird." Everyone knows that for ages past there has been a bird bearing this title. It is a pretty little bird belonging to the plover family—black, white, and salmon-colored; and it is said that in recompense for his services in warning the crocodiles of danger the reptiles open their jaws and allow the little birds to pick out the fragments of food from between their teeth. It may be so. Perhaps the truth of the tradition will one day be established by photographic evidence. But on the White Nile, where both birds are in evidence—though the spur-winged lapwing is much the commoner of the two—I never saw the crocodile bird in company with the reptiles. They were usually to be seen singly, seeking food in places where the natives kept

their canoes and fishing gear. The spur-winged lapwing, on the other hand, appeared to be at home wherever there were crocodiles, and when in their company he showed greater vigilance than all the other African birds. Even though he was not always the first to take wing, he was quicker than any other bird to spot anything of a menacing nature, and the sharp piercing cry of his alarm rang out high above the cries of all his congeners. I never saw him performing the function of nature's dentist on the crocodiles but possibly, at some future time, I may come across him again. Persevering patience, sustained for weeks on end, is required in order to catch sight of incidents of that sort.

As it happened, I had not so long to wait for my negroes as I feared. Mohammed, whose eyes were astonishingly sharp, pounced like a hawk upon the poor fellows on the raft. They were sleeping the sleep of the just when he came rowing along with his naked crew. I could see him in his long garment which reached to the ground, as he stepped on the raft and aroused them. He shouted and gave his commands as if he were the leader of a boarding party. The crocodiles vanished into the depths of the

river. The black men obeyed his orders and the raft drifted on its way. Whereupon Mohammed rowed over to me with an air as if he had vanquished a hostile negro tribe. Then, considering that the creatures I was after had been severely frightened by the raft and would not come back, I decided to move on. We hoisted sail and maneuvered the dahabiyeh farther south to a more concealed position on the other side of the river. We anchored for the night close under the bank. Here the thorny scrub extended to the water's edge and the vessel was completely hidden from view on the land spit by the jungle of grass on the island.

That night was a restless one. Probably some creature of the forest had fallen a victim to a leopard, and a pack of hungry hyenas had apparently gathered at the spot to take their share of the meal, for about midnight there were hisses and growls and howlings of a kind to discourage any man from venturing in that direction. Now and then through the windless night came sounds of the trampling of buffalo hoofs on the hard ground. Far away on the other bank of the Nile other hyenas were howling who had heard the uproar going on around the booty but dared

not cross the stream for fear of the crocodiles. And that was not all. After midnight some hippos began rising and snorting round the vessel, bellowing loudly. They were evidently much distressed. I could not understand it. Hippos it is true, were around us all the time. These harmless inquisitive creatures took a delight in rising a short distance behind the dinghy to snort and grunt as if by way of protest against being disturbed. But it was obvious now that they were angry. Mohammed thought so too. It was impossible to perceive the creatures in the darkness. They rose round about the vessel, now here, now there; sometimes not a stone's throw away, as far as one could tell from the sounds. On account of the heat my bed had been placed on the deck roof under the mosquito net. As I found it impossible to go to sleep, I looked about for a few empty bottles and hurled them in the direction of the animals. But they took no notice of them. At last the noise was more than I could bear, so I got up again and fired some shots into the air with my Browning, hoping by this means to get some sleep. It proved effective for a quarter of an hour, then the hubbub began all over again. With this noise and the howling of the hyenas in the dis-

tance and the chirping of millions of crickets on both sides of the river, the frantic pandemonium that took place on that hot windless night was beyond belief.

It was not until dawn broke that we were able to figure the reason for it all. Rising every now and then to the surface round the dahabiyeh was a harpooned hippopotamus! Attached to the harpoon by a rope was a float, consisting of a rough block of wood, which the creature was trailing behind it. And a little farther away an unusually large hippo, an old bull, circled round and round the agonized cow with the whole of his head projecting from the water, bellowing in a manner that betrayed his fury and anxiety.

What had happened was clear enough. The Shilluks had harpooned the female during the evening while she was on her way to pasture and had left her, as their custom is, to go back to the water hampered by the harpoon and float, there to die in agony. So far as they were concerned, all they had to do was to watch her movements for a day or two until her strength ebbed away. Notwithstanding that the bull was driven to frenzy by the cow's terrified roars, he was also perplexed and troubled by the distressing

sight and followed the float about to see what it was and whether he might free her from it. They had swum round in this way throughout the night. Judging by the sounds we had heard there must have been others there too; but these were no longer to be seen. It was a puzzle to me why the poor harpooned creature remained in our vicinity for immediately to the northward the river was a good deal broader. The idea expressed by the crew was that the hippos came close to the dahabiyeh with the intention of attacking it in a spirit of revenge, but that I could hardly believe. It was conceivable, however, that their roaring might have been provoked by our presence. Possibly the water was deeper where we were moored and that caused them to come near us. Every now and then the poor beast's head emerged so close to me that I could have put an end forthwith to the creature's misery, if I only had had a rifle and, of course, a game licence.

Under the circumstances all I could do was to try, by means of my motion picture camera, to place on record some of the events in this spectacle of beast torture; a form of cruelty that is practised not only in this part of the world but also in the Arctic ocean by the whalers, and one,

too, I'm afraid, that will continue for years to come. Yet in other parts of the world high penalties are prescribed for flogging a disobedient dog, or for shooting a female bird when she has young ones. Films of this sort might serve usefully in the future to promote the protection of these animals, an object which, it is to be hoped, will not be weakened by over-zeal and a superfluity of stupid laws.

At sight of the dahabiyeh a rabble of Shilluks came running to the bank. They thought we might be on a hunting expedition and called out asking us not to shoot their quarry, for if we did, it would sink to the bottom and be lost. Meanwhile, the creature had disappeared northward. The negroes climbed into their canoe and followed it. They steered close under the bank where they were less liable to be attacked by the gigantic animals. It occasionally happens that a hippopotamus capsizes a canoe, upsetting the whole of its negro occupants into the water. I noticed not long afterwards, when we put the cameras into the dinghy to cross over to the crocodiles again, that my native crew steered straight for the island and, having reached there, hugged the bank, keeping a sharp look-

out all the time for the hippos whose snortings were audible from afar.

When we arrived at the land-spit it was deserted except for the spur-winged lapwings who flew away screaming. But away out on the river floated some pieces of "tree-bark." No one would have dreamt that they were anything else but pieces of tree-bark. But my desires were focussed upon our familiar herons who were so conspicuous by their absence yesterday. As soon as my cameras had been concealed in the grass hiding-place—Allah,—how my hands burned with the nettles!—I let my negroes decamp with the exception of one who was instructed to conceal himself farther southward in the grass and to come to me if I signalled to him. Mohammed set off on a new jaunt with his crew to the jungle on the east bank, perhaps to ascertain whether the cranes had journeyed back to Europe. But for me the day was even less propitious than the preceding one.

Scarcely had the spur-winged lapwings returned and the first flocks of birds settled upon the land-spit, than I heard negroes shouting and yelling loudly on the river. I peered through a slit with my field-glasses to find out

the cause of the commotion and espied the Shilluk canoe, in tow of the harpooned hippopotamus, coming obliquely across the river. These fellows did not show an atom of fear. They had succeeded in paddling close up to the creature and making a rope fast to the float. It turned out, as I afterwards ascertained, that the rope had been borrowed from the Admiral of the dahabiyeh. The hippopotamus, driven half-mad with anxiety and fright by this additional torment, towed the canoe along behind it until the water sprayed from the bow. Again and again the creature rose snorting with rage and pain to the surface, then dived again to the depths in its endeavors to rid itself of its tormenters. One of the negroes was steering with a paddle. The other stood upright in the bow and, balancing himself like a snowshoe runner on the narrow craft, poised a harpoon in his hand in readiness to strike. At length he succeeded in hurling two harpoons into the creature. The hippopotamus by this time appeared to be completely exhausted. As they came into the shallow water in front of me the other Shilluks came tearing through the grass jungle on the spit and leaped recklessly into the water where the crocodiles were. They threw a long line to the

fellows in the canoe who quickly made it fast to the straining rope. And then the fate of the quarry became sealed. The whole rabble, boys as well as grown-up men, held on to the rope. I cut my way out of my hiding-place with a knife and crept forth with my camera. The negroes might well have mistaken me for a ghost but they were so busily occupied with their capture that they merely threw a momentary glance in my direction. Then the tug of war for life or death went on again. I can hardly bear to describe it. The beast, tormented to the point of death, was drawn in foot by foot and more harpoons driven into its lacerated body until, having been hauled up high enough, one of the fellows ventured cautiously into the river and plunged a spear into its bloody neck. He stabbed again and again. Another one leaped forward and tried to do the same thing. The blood gushed forth into the turbid water until the shore round about became crimson. But still the great beast did not die. It rolled about in agony and bit furiously at pieces of wood while the black devils leapt about on the bank like so many spirits from hell. And so it went on until finally, when the ponderous head with its eyes wide open and staring in terror was brought near enough,

I put an end to its misery with a bullet from my Browning, regardless of any laws. But for a long time afterwards the black demons kept plunging their spears into the quivering flesh and the boys vied with each other to see which of them could drive the point of a harpoon through the thick hide.

It is not for me to say that the hunting method as practised by these wild natives is any worse than the greater part of the senseless slaughter carried on by white men under the guise of science. On the contrary, it is far more sportsmanlike when a naked native crawls up to a browsing hippopotamus in the twilight and plunges a piece of iron into its body, doing so for no other purpose but to obtain food, than when a white man annually shoots his two elephants, as permitted by licence, and afterwards sells the ivory. But the spectacle of torment, when the harmless creature was put to an agonizing death on that shore made crimson with its blood, was no more loathsome a human crime than the misdeeds that, only a few years before, were being hatched on the green baize tables of Europe. The day before, the sun had shone down upon a splendid picture of the Garden of Eden; beautiful tropical birds had moved

trustfully about among gigantic mailed lizards, and now nothing remained but the lacerated body of the dead creature on the blood-stained bank of mud. Man had entered the arena! And my longed-for herons had all vanished into the blue ether of the skies.

CHAPTER XVII

Allah alone knew when the crocodiles would venture to return. I should have preferred to hoist sail and leave the place, the more so since the storks were flying northward across the sky in ever-diminishing flocks. But no sooner had we begun to row away than some dark vultures came sailing over the island, ever on the look-out for spoil. On the bank opposite the island a whole camp of Shilluk negroes had assembled. They had hauled the hippopotamus up on to the shore. On the day following all the negroes in the neighborhood would be gathered together there like flies to celebrate a carnivorous orgy. So I sent Mohammed to negotiate with them in a befitting manner.

When we arrived at the island on the following morning, all the natives had returned to their village. The remains of the hippopotamus had been dragged by them beforehand to a spot not twenty paces from my grass hiding-place.

Barely ten minutes after my negroes had gone the

first vultures came sweeping down. A pair of white-necked crows and a parasitic kite came at the same time. After another ten minutes—I was keeping my eye on my watch—the whole place in front of me swarmed with so many vultures that I didn't know which way to direct my camera. This then was how they behaved in Africa.

I smiled quietly to myself at the recollection of all my vain attempts to get near the sea-eagles at home. Once, in late autumn, when it was bitter cold on the reefs and the birds had all gone, and I knew that the four remaining old eagles in Sweden, whom nothing would induce to leave their native district in the winter, were hungry, I deposited a whole elk on a lonely rock near their sea-home, a place where men seldom appeared. And what did they do? Day after day they circled above the lure. Every morning they sat peering forth from their look-out trees. They were longing for it. A golden eagle who was passing by flew down to the spot and gorged till he could eat no more, then a raven took up his abode on the rock and croaked at us whenever the boat came near. But for three weeks I waited in vain for the sea-eagles.

And here, in this country, all that was necessary was to

get the natives to expose a few pieces of flesh and within a quarter of an hour these mighty birds-of-prey—larger than any eagle and probably just as sagacious—came rushing down to the spot from all directions and behaved like so many barn-door fowls. It was merely a case of selecting whichever bird one chose to photograph, and it went so far at last that I often, though ineffectually, admonished the great stupid creatures from behind my grass screen for obscuring each other by opening their wings or requested that they "look up with a pleasant smile." The photographs reproduced on these pages do not represent as much as a twentieth part of the output of those days. It only came to light afterwards that one of my cameras had become warped in the tropical heat, with the result that it focussed imperfectly, and I had to reject several hundred blurred negatives for which sharp definition was essential. Among them there may have been some which display that artistic haziness of definition that is so much sought after in modern photography. But, after all, it was only to be expected that I should meet with some misfortune or other; and the few selected photographs here reproduced must serve, as far as possible, to illustrate these interesting crea-

THE SPEAR-THROWER.

THE DEAD HIPPOPOTAMUS IS HAULED ASHORE.

"If in Hades There was Such a Thing as a Winged Cerberus it must have Been One of These Hellish Birds."

tures. For I need hardly say that it was absorbingly interesting watching these tropical aspects of bird-life.

The first one to come was a white-headed vulture. Then a succession of lappet-faced vultures with bare wrinkled heads came swooping down from the air on their mighty wings. These are the largest and strongest of the tribe, and each one as he came down chased his predecessor from the spoil, his vehemence depending upon how hungry or greedy he happened to be. I have never in my life before set eyes upon such repulsive objects as they were. If in Hades there is such a thing as a winged Cerberus it must surely be one of these hellish birds. The plain nut-brown wings envelop the body like a sombre cloak from which emerges the naked flesh-colored head, whose redness under excitement changes to a choleric blue. And excited, indeed, they were when the marabous arrived! But before that various kinds of vultures had assembled at the spot. There were griffon vultures who were smaller and weaker than the others, though larger than the king vulture. They moved their long white woolly necks, which were thrust up above a light brown frill, in the manner of a snake, just as their kindred did the griffon or Ruppel's vulture, of the

interior of Africa. What an odd custom it is, surely, to saddle birds with human surnames—of which there are many. They stood out conspicuously from the others by reason of their light spotted wings. The last of all to come was a Berseker of a fellow, whom I at first mistook for a lappet-faced vulture. He plunged down into the gormandizing throng, drove several away, and joined company with a lappet-faced vulture and a white-headed vulture at the repast. It was the black down on his head that caught my eye and caused me to aim my camera at him; and so it came about that I got all three in one photograph. Unless I was mistaken this bird was the powerful black vulture hitherto unknown to science as a denizen of this part of Africa. It turned out afterwards that I had been right. The round-shaped nostrils of the bird distinguish him from the lappet-faced vulture whose nostrils are vertical. Apart from that, he has splendid brown wool on his head. If I had shot this bird and sent his skin to a museum, there would have been good grounds, some fifty years hence, for doubting whether he had really been found here. Incorrect habitats are as often as not specified in museums and in scientific books. But the photo-

graph showing the two kinds of birds side by side and the fact that it was taken at the easily identifiable spot in the interior of Africa where I had previously photographed the large crocodiles and definitely tropical birds and, later still, the marabous, contribute to prove beyond any doubt that this vulture occurs in these southern latitudes. His appearance on the White Nile is very interesting for the bird is usually found in the south of Europe and in North Africa and scarcely ever ranges as far as Upper Egypt. I merely record this instance to show that the camera may occasionally be turned to as good a use in the interests of science as the dumdum bullet.

Now, where did all these vultures come from? Before the day on which the hippopotamus was killed not a single one was to be seen. These singular birds must fly at an almost inconceivable height and it probably happens that when one of them closes his wings and swoops down to a certain spot, his plunging flight is perceived and recognized by another one who likewise swoops down to the same place to see what is up. This last vulture's movements are observed by still another one, and so it goes on until, within a short time, all the vultures within a square mile congregate at

the same spot. Those, too, who happen to be at some distance on the ground, or are sitting in the trees, are quick to recognize the downward plunge of their kindred, and they follow after.

The opinion formerly held, that it is their sense of smell which enables vultures to detect prey from heights so great as often to render them invisible, may have been due to our inability to grasp the idea that there are creatures who are able to see farther than we can. That explanation may be put aside. I will not venture to deny that they are possessed of a keen sense of smell, but I maintain that it is their wonderful power of sight which enables them to spy out food from incredible distances. Other birds have equally keen powers of sight. The fact that some time elapses between the arrival of the first vulture and those that follow points to the probability that the majority of them are only made aware of the spot where the prey is, by observing the downward swoops of the other birds. Once the first vultures have arrived, the rest follow quickly.

Modern scientific research [1] has revealed that the yellow

[1] Dr. Hans Henning: Optische Versuche an Vögeln und Schildkröten über die Bedeutung der roten Ölkugeln im Auge. Pflügers Archiv für die gesamte Physiologie des Menschen und der Tiere, Band 178. Berlin, Springer 1920.

and yellowish-red in the retina of the eyes of many birds gives them sharper power of sight than other creatures. The explanation of this is that the long waves of light which are produced by the red and yellowish-red rays penetrate more freely through vaporous mist and heat haze and, generally, through the opaqueness of the lower stratum of the air. Anyone who has flown at great heights will have noticed how this stratum of mist obstructs not only human vision, but also the lens of a camera; at such times, for instance, when one is bent on observing a body of soldiers or a bird flying beneath an airplane.

"It is due to these color filters," says a German scientist, "that birds are able to perceive the coast of Africa while they are still over Italy, even though visibility may be poor."

The African vultures possessed this marvelous power of sight, as well as the house-storks and marabous.

Up until now I had no notion that the marabou existed here. The first one did not appear until there were at least thirty vultures on the bank, but in a short time there were eight of them taking part in the banquet. The wind, as usual, was from the north and in order to alight the gigantic birds had to pass close over my head. When they

swept by, their wings made the grass roof of my hiding-place rustle. Observing their heavy bodies and the force put forth by their wing beats to uplift them, it seemed incredible that they could be the same birds whose white undersides sparkled like stars in the blue ether when they floated at enormous heights without any beating of their wings. As they stood there on the bank they were actually, as the Lapp had said of the cranes, "as big as a man." They were beautiful in their blue-gray tails and white waistcoats, with faces like old bald-headed dandies.

A whole book might be written on the marabou by anyone who knows him. Everyone who has traveled in the interior of Africa knows him by sight; but I know only two men who have seen his nest in a giant tree of a far-off wilderness. He is, as people say of men who occupy exalted positions, "a very remarkable personality." One in particular that I snapped with my camera was, unmistakably, an old experienced gentleman who had often taken part in such festivities. He was the first one to come and the last to go. With his air of importance—his whole general appearance, in fact, he was the very image of one of those self-satisfied public benefactors who stand aloof from

The Powerful Black Vulture.

"They were Inclined to Keep Out of Each Other's Way in a State of Armed Neutrality."

"The Water Foamed up about the Dark, Mailed Body."

all political factions. And when he took to superintending the vultures and enforcing obedience upon them, he was sublime. For that purpose, indeed, his bill, which resembled a plough-share, was admirably adapted. One minute he would be standing in the midst of the vultures to see that they were conducting themselves properly, and a moment afterwards he was stalking about with immensely long strides on a round of inspection. Without haste, yet without hesitation, he would come along and take the food right out of their mouths. One of the largest of the vultures spread his wings over his piece of flesh and lay down to rest with all his feathers abristle; but all the marabou did was to stand over him and blink quietly at him with his brown eyes, looking the picture of innocence. Then, suddenly, his tremendous beak shot forward like a thunderbolt between the vulture's talons and with a quick movement of his neck he flung it up into the air and with one gulp it disappeared into the pouch of his naked crop.

So many things happened after that, that it would take too long to relate them all. He was such a cunning old man. There was one lappet-faced vulture who was bigger

than his fellows. He and the marabou behaved like two Great Powers. They were inclined to keep out of each other's way in a state of armed neutrality. It chanced during the general rough-and-tumble that the vulture succeeded in tearing forth a long piece of gut. He struggled out of the crowd backwards with his spoil. The other vultures, meanwhile, remained at a respectful distance from him. But the marabou came quietly up from behind. I expected that he would lay hold of it, but he merely preened his feathers and looked on in an attitude of unconcern. The vulture had not succeeded in breaking the gut away entirely so he continued to work with might and main. He tugged and he hopped about. Occasionally he paused in his efforts and it looked as if he'd soon have to give up. The heat was terrific. The marabou awaited his opportunity. He was content to leave the menial task to the vulture, considering that he had mandibles like a pair of forceps. At last the vulture succeeded, and while he sat panting with open beak to catch his breath, a long bill suddenly shot out like lightning from behind his back. It happened so quickly that the plate I was exposing was spoiled. And by the time the surprised vulture had

"The End Dangled from His Under-mandible like a Piece of Rope."

"With His Jaws Agape He Likewise Fell Asleep."

turned around to see who had so ungallantly stolen his plunder the marabou had already dragged the coveted object to the water to wash it, as was his custom. Then the long loop disappeared with incredible swiftness into the depths of his deep crop, while some of it dangled from under his mandible like a piece of rope. It must have been uncomfortable but he didn't seem to mind. He was so close to me that I felt inclined to make a hole in my screen and ask him if he wanted any help.

How the maribou managed to deal with the dangling end I missed seeing for at that moment something more important happened and I was unable to follow his fortunes any further. Striding along in the water at the edge of the bank quite close to me, was one of my longed-for herons. And when I peeped out through a slit towards the landspit, which up until then I had forgotten all about, I saw a whole lot of crocodiles that had meanwhile crawled up unperceived by me. And there, nearer even than the first one, was another of my longed-for herons. Gently I turned my camera in his direction. How cautious these two foreigners were amidst the unsuspecting tropical birds! The nearer one must have observed me for he disappeared. But

the other one remained. He was an old bird, white and pearl-gray. On my right hand standing in the water, was a marabou and a darter and—what could that object be that came floating along behind the marabou's legs?—it was the large crocodile! So all the commotion that had taken place had not driven these "shy" creatures away. The presence of the many birds was, perhaps, a sign to them that no danger was at hand. The giant glided inperceptibly towards the bank as he had done on the previous occasion. The marabou moved a little farther off, enabling me to obtain a clear view. Nearer and nearer came the dark head. The back rose above the surface of the water. Where was he heading for? His line of direction was straight for the herons. Could he by any change be intent upon devouring my birds? Though it may seem absurd, I could not help feeling anxious concerning the fate of the only living creatures here present who might be countrymen of mine. The crocodile kept coming nearer. The suspicion that he had an evil intent, notwithstanding that he advanced so quietly, moved me to take hold of the camera and set it in motion. I had started just in time. For with incredible velocity he suddenly shot forward like a

torpedo. The water foamed up about the dark mailed body. The yard long jaws with their jagged sharp teeth opened in a devilish grin, such as would infallibly have put a lion to flight. But the little heron from home stood as unperturbed as if a cow had approached him on a sunny morning in Holstein. As the monster shot past him splashing up the water, he never moved as much as an inch. For he was aware that the object of the attack was another crocodile behind him. How could he have known it? That he was an old experienced bird one could see by his plumage. Was it his instinct, or was it because year after year he had made the same journey from his home to the tropics and had come to know these huge reptiles who hate human beings and slay them, but who never do harm to the little creature.

My belief is that it is not instinct alone but experience as well that produces such calmness. No man on earth would have stood his ground where the heron stood, without stirring. If anybody doubts the story my film is there to convince him.

The crocodile, whose wrath had abated, glided gently back into the river. The heron stood there alone for a

while. The other birds had flown away one after another. Then he, too, took wing and I felt positively lonely left as I was with the remaining Africans. A vulture who was unable to devour any more stood in front of the crocodile. And there at last, under the flapping wings of the vulture, was the spur-winged lapwing, the "crocodile bird." It had been a fortunate day! Then the vulture spread out his cloak to dry in the sun and fell asleep with sunken head. The other birds had flown off to their resting places or to encounter new adventures. And of the small crocodiles only one, who was no larger than myself, crept close up to me on the shoal and with his jaws agape he likewise fell asleep.

The sun was unbearably hot. My film had come to an end and there was nothing else to do but light another pipe and think about the herons and storks who were now on their way to cooler countries.

Then in the distance I heard a shot. Startled, I thought of Mohammed and his leopards. But immediately afterwards there came through the still air the sound of oars. The vulture took himself off; the spur-winged lapwing gave the alarm signal; and the crocodiles plunged into the

"They Slept with Their Bills Hidden in Their Crop Feathers."

"They had All Three Got Hold of the Strip with Their Beaks."

river. The negroes drew ashore and came running through the grass. The smoke of a steamer had been seen in the south.

That evening, in my cabin on the dahabiyeh, I developed some of my plates by way of experiment. The steamboat that had been sighted turned out to be not the cattle transport steamer but the hunting steamer of an English sportsman, Sir George Abercromby, who had come from Lake Noo and was kind enough to take the dahabiyeh in tow down part of the river. While I was engaged in developing I could hear outside the rhythmic pounding of the steamer and the breaking water on her bow. The Nile water was perilously warm for the plates but I was unable to restrain my curiosity to see what the result of the day's work had been. Here and there I got a good negative. Most of them, however, were only fit to be thrown away. One plate was truly amusing. It was of three marabous who were pulling at a strip of flesh, while the "old gentleman" stood aside gazing at the lens of the camera; he, of course, having no notion of what was going on. All three had got hold of the strip with their beaks and were having a regular tug of war. How they struggled in the heat over

this shred of flesh! While I was looking at them by the light of my red lamp and thinking of the good dinner that would presently be served in the mosquito house of the steamer, I recalled a dinner I once had at another English table, and how the marabou had fared on that occasion.

It was one day in Cairo when I was lunching with Lord Allenby, who took almost as great an interest in birds as he did in armies. The host was telling us about the well-known crane from Russia that fell into the hands of the Dervishes at Dongola and whose necklace was afterwards shown to the prisoner, Slatin Pascha. According to the African version of the story, the captured bird is said to have been tried as a spy and condemned to death because of the message he bore. Has any bird ever met with a stranger fate? Certainly no crane in Africa ever has! At that moment I noticed the unmistakable shadow of a large long-legged bird on the sunny terrace which ran the length of the dining-room at the Residency. I turned full of curiosity to my hostess and asked what kind of bird it was that had just walked past. Lady Allenby glanced at the door with a smile and pointed to a chair which had been placed at the entrance to keep him out.

Allenby and His Marabou.

"That is my husband's very dear pet," she said. "He is waiting out there for his lunch."

He was a tame marabou, and he did not wait in vain. When we went on to the terrace which led down to the Nile the marabou was there. Close by him stood a Nubian servant with a plate of meat and a silver fork. And the Field Marshal himself took the plate in his hand and fed his beloved bird morsel after morsel with the fork.

As I gazed at the negative in my hand, I could not refrain from drawing a comparison as to which had the best of it: the marabous here on the White Nile, who must fight for their shred of flesh, or the marabou in the beautiful garden of the Residency in Egypt, whose meals were fed to him with a silver fork.

A week later I was in Khartum, and a few days later, in Egypt. It was as if the thousands of birds-of-passage who had previously covered the banks of the White Nile over the whole distance up-stream had been blown away. Once the birds-of-passage start northward they gather their forces with incredible rapidity. Nothing but small flocks of cranes were left standing on the mud-banks where,

a few weeks earlier, there had been whole armies. All day long a procession of storks passed by high up in the sky. They sailed along in open companies of from ten to fifteen birds flying abreast, and for hours together an endless succession of these companies was to be seen passing northward. New ones continually rose from the ground and joined them. Here and there a small flock had come to earth to rest on the banks. My camera was of no use to me here, but the joy of following them was so great that I continued on to Palestine.

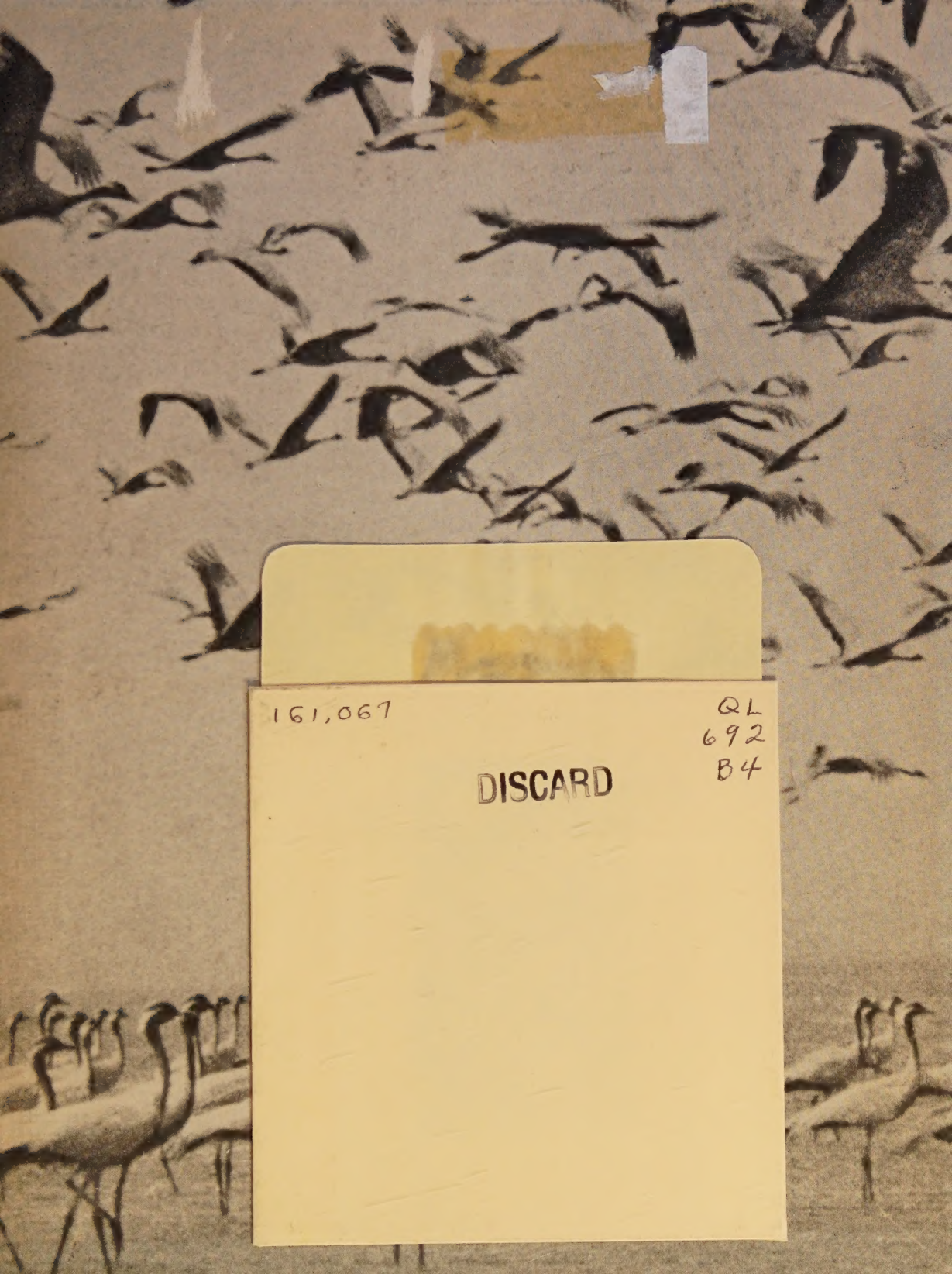
The day I left Egypt there was a desert storm raging. The sand whirled in clouds over Cairo, and the bridge over the Suez Canal was torn away. Nor was that all. Having at last succeeded in getting across in a boat, blacks and whites alike were crowded together in the train like herds of cattle. During the night the train came to a stop in the middle of the Sinai Desert. And there we stayed. It was one of the most uncomfortable nights I have ever spent.

Towards morning the storm abated. A warm moist wind blew up from the west; the sky glistened blue as it does on the Mediterranean; and the mountains, where the burdensome ten commandments were written, shimmered

far away in the south. And over the whole face of the country, from the desert as far as Jerusalem, there were storks. They stood tired on the shore where the breaking waves of the Mediterranean were gradually abating and on the fields of the valley of Sharon, where the lilies were sprouting from the vernal earth. They were no longer shy as they had been in the tropics. Fatigued by the storm they stood about on the fields, in the gardens, and in front of the houses of the villages and slept with their bills hidden in their crop-feathers.

It was not until we reached Gaza where the whole place was perfumed with orange blossoms that I again saw a flock in the sky. But these were flying in line. They had not done that before. I searched the whole vault of heaven carefully with my field-glasses, and then I discovered them. They were too high up for one to distinguish with the naked eye. But surely that group up there was in ploughshare formation; and what about those others flying in two wedges, one behind the other! I could not be mistaken. They were not storks. They were the "Kuorgas"—my cranes!—making their way towards the distant homeland.

The northerly gale had no power over these large strong birds. They pushed forward on their way without rest. When the leader was fatigued he left his station and the next pair of wings shot past him to take his place and guide the wayfarers through the sea of ether. Thus they vanished into the haze over the blue mountains towards Jerusalem, and home.



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